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ABSTRACT

The fourth in a series of reports on undergraduate teaching contains articles on three disciplines: (1) geography (William D. Pattison, Salvatore J. Natoli, Peter Binzen, Charles J. Sugnet, Edwin Kiester, Jr., Sally Valente Kiester, Evan Jenkins, Peter Kakela, David Lanegran, Paul W. English, Peter Gould, and Alan DeLucia); (2) music (Theodore A. Tellstrom, Herbert B. Livesey, Ronnie Dugger, Gary MacEoin, Judy Miller, Robert Pace, Marian Demand, Roger Dean, Robert A. Wessler, Leon Breeden, and Lawrence A. Eisman); and (3) sociology (Lawrence J. Rhoades, Hans O. Mauksch, James Benet, Jean Dickinson, Susan Nelson, Kenneth E. Eble, Daniel L. Abbott, James M. Calcnico, Nancy Olson, Robert Gliner, Thomas Rice, Vaneeta D'Andrea Burkhart, and Paul J. Baker). (MSE)

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From the editors of

Change

The Magazine of Learning

ED140758

4 REPORT ON TEACHING

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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ANALYSES OF SOME OF THE MOST NOTABLE IMPROVEMENTS IN AMERICAN UNDERGRADUATE TEACHING

2

ABOUT THIS NATIONAL TEACHING PROGRAM

For the second year in a row, Change has sponsored an invitational conference to help determine directions for its National Teaching Program. The first engaged the leading scholarly disciplines; the second brought together national authorities concerned with improving curriculum and pedagogy. One can only be impressed with the fresh enthusiasms that leaders in these fields bring to these perennial concerns. As Richard Meeth makes clear elsewhere in this issue, however, the question remains as to whether such national concerns have yet sufficiently penetrated academic practice around the country.

When the first waves of the new steady-state mentality broke over the campuses, it could have been rightly expected that the new economic stringencies would ultimately lead many faculty to greater institutional, as opposed to discipline-oriented, concerns. It is possible to be a splendid biologist or historian, but if students fade from the classroom, both jobs and institutional futures are at stake, regardless of professional reputations. From my own limited observations, this quite logical sequence of assumptions does not in fact appear to have taken place. Even in 1977, improved teaching is not usually connected with institutional survival rates, though student transfers are now legendary both in their number and the facility with which the bored simply "stop out."

One cannot help but think that teaching which more successfully engages undergraduates in their work could well diminish institutional distress triggered by an eroding enrollment base. But whether these connections are in fact being made on more than a few campuses remains a rather large and important question.

—George W. Bonham

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REPORT ON TEACHING: 4

GEOGRAPHY:

10 CHANGE IN GEOGRAPHY: THE DOING DIMENSION, William D. Pattison, Chairman, Department of Geography, University of Chicago, and Salvatore J. Natoli, Educational Affairs Director, Association of American Geographers

12 EXPANDING THE BOUNDARIES OF GEOGRAPHY, Peter Binzen
With the help of a computer, a gifted teacher transforms geography from a storehouse of facts to a study that embraces economics, political science, and history. E. L. Ziegler, Colgate University.

16 METAMORPHOSIS OF A GEOLOGY DEPARTMENT, Charle J. Sugnet
The professors have radically altered their approach to learning, inviting undergraduates to undertake independent projects for courses and to evaluate their own work—in short, treating them like equals in an academic community. Bill Romey, St. Lawrence University.

20 NEW DIRECTIONS IN AN ANCIENT DISCIPLINE, Edwin Kiester, Jr., and Sally Valente Kiester
A geography internship gets students out of the map room and lecture hall and into careers in transportation, urban planning, and environmental affairs. Harvey E. Heiges, San Diego State University.

25 DOUBLE EXPOSURE: MORE TIME FOR STUDENTS, Evan Jenkins
The audio-visual-tutorial lab, featuring a variety of multisensory materials from maps to slides to rock samples, allows geography students to pace themselves through a recorded lecture series while freeing their professor for one-on one discussion sessions. Benjamin Richason, Carroll College.

14 BETTER ENVIRONMENT, BETTER LEARNING
Peter Kakela, Sangamon State University

18 EXPLORING FORGOTTEN URBAN SPACES
David Lanegran, Macalester College

23 MOLDING MINDS WITH MEDIA
Paul W. English, University of Texas at Austin

24 THE TRILINGUAL APPROACH TO GEOGRAPHY
Peter Gould, Pennsylvania State University

28 ENCOURAGING A VIEW OF ONE'S OWN
Alan DeLucia, University of Idaho

MUSIC

30 MUSICIAN OR TEACHER—THE DELICATE BALANCE, Theodore A. Tellstrom, Executive Director Music Educators National Conference

32 ANOTHER WAY OF HEARING, Herbert B. Livesey
Making melodies, not just listening to them, sensitizes students to acoustical nuances in an introductory music course. Arnold Burkart, Ball State University.

37 ELECTRONIC MUSICIANS: WIZARDS OF SOUND, Ronnie Dugger
Asserting the aesthetic equality of sounds, devotees of electronic music effect a Renaissance fusion of composer and performer in a very modern fashion. Loran Carrier, Virginia Commonwealth University.

42 THE DO RE MI'S OF TEACHING MUSIC, Gary MacEoin
Public school districts and the university cooperate to provide prospective music teachers with early preservice training. Joseph Landon, California State University at Fullerton.

46 HOW TO MAKE IT IN THE MUSIC BUSINESS: MIAMI'S SUCCESS STORY, Judy Miller
Rigorous interdisciplinary programs that stress the business side of music are turning out a new breed of musical engineers and managers, trained in the university rather than in the marketplace. William Lee, University of Miami.

34 MUSIC AS A SOCIAL ART
Robert Pace, Teachers College, Columbia University

36 CREATING A BRIDGE BETWEEN LEARNING AND TEACHING
Marian Demand and Roger Dean, Temple University

40 MUSIC FOR THE FUN OF IT
Robert A. Wessler, University of Wisconsin at La Crosse

44 JAZZ FOR CREDIT AT NORTH TEXAS STATE
Leon Breeden, North Texas State University

48 HELPING THE YOUNG TO HEAR MUSIC
Lawrence A. Eisman, Queens College, City University of New York

SOCIOLOGY

50 THE SOCIOLOGY OF TEACHING AND THE TEACHING OF SOCIOLOGY, Lawrence J. Rhoades, North Carolina State University at Raleigh, and Hans O. Mauksch, Executive Officer, American Sociological Association

52 MORE THAN TECHNIQUES: A RESEARCH CENTER WITH HEART AND SOUL, James Benet
A student-initiated research center offers training in professional techniques along with the camaraderie and excitement of a creative community. Jeanne Curran and Herman Loether, California State College at Dominguez Hills.

57 INTRODUCTORY SOCIOLOGY. ANY NUMBER CAN PLAY, Jean Dickinson
Simulation games imbue students with an understanding of the building block concepts of sociology without defusing their interest. Richard Dukes, University of Colorado at Colorado Springs.

61 ENDING THE BASICS BLUES, Susan Nelson
Computers ease sociology students through the baffling basics of statistics and methods by introducing them to real research problems. Stephen G. Wieting, University of Iowa.

66 A COUNTERFORCE WITHIN THE SYSTEM, Kenneth E. Eble
Sociology students design their own learning contracts—combining wilderness survival, community service, and traditional study—in an effort to revive academic holism. John F. Seggar and Wesley W. Craig, Jr., Brigham Young University.

54 SOCIOLOGY THROUGH SOCIAL ACTION
Daniel J. Abbott and James M. Calonico, University of New Orleans

58 SHARING THE FRUITS OF UNDERGRADUATE RESEARCH
Nancy Olson, University of Santa Clara

64 SOCIOLOGY ON A TRIAL BASIS
Robert Gliner, San Jose State University

68 MAPPING THE LEARNING TERRAIN
Thomas Rice, Denison University

70 TURNING THE TABLES WITH AUDIOVISUALS
Vaneeta D'Andrea Burkhart, Essex Community College

71 CHALLENGING THE SOCIOLOGIST'S EYE VIEW
Paul J. Baker, Illinois State University

---

6 PROFILE OF A PROFESSIONAL: RUTH JACOBS, BOSTON UNIVERSITY, John Egerton

4 DOES ANYBODY CARE? L. Richard Meeth

72 INDEX

THESE REPORTS ON TEACHING
Progress and Prospects

Each of the four Reports on Teaching has a story of its own that begins with the first tentative suggestions for the disciplines to be included and ends—sometime in the future. Only a fraction of each story can be told here, for the most interesting chapters are still unfolding, as professors across the country put the material to use. Have the Reports done anything to improve teaching? What has happened to the professors whose courses were selected? The pulse of higher education is difficult to monitor, yet we try to answer such questions to discover whether this approach to the recognition of good teaching is effective, whether it is worth the effort.

And it is a considerable effort. In two years, the Reports have analyzed 103 learning experiences in 12 disciplines. Well over 200,000 copies have reached readers in 47 states and abroad. And for each Report the cast of characters—professors, writers, evaluators—numbers well over 100.

The human element, then, is primary and unpredictable. No straightforward statistics here. No polite, well-mannered survey results or clear-cut percentages and ratings. We report on the accomplishments of many human beings, all of whom enjoy the fame that comes of a flattering portrait and few of whom, understandably, are confident enough to let the weaknesses and failures be known. We tred softly, believing that for now encouragement and recognition of work well done will accomplish more than even constructive criticism.

We do have one way of determining the interest in improving teaching generated by the articles: the inquiries received by the professors. Allowing six months to intervene between distribution of the Report and our insatiable curiosity as to its impact, we find that there is a tremendously wide range in the number of responses—one professor reports over 100 letters and calls while another receives only 1. (The average number of requests runs around 25 or 30.) Comments from the professors themselves also vary greatly. A sampling reveals the diverse situations and perceptions inherent in such an enterprise:

> Perhaps the *Change* series may eventually create a climate where good teaching is not only recognized but valued as well. Until then, many of us belong to an endangered species.

> I have been written up in both local papers, two or three professional publications have published a blurb about me, I was asked to speak at a symposium; the board of trustees gave me a special commendation as did my division chairman, department head, and dean of instruction. I have received two letters from mothers in the community who want me to personally tutor their delinquent sons. I was given an offer to publish a book on my course.

> I had remarkably little response to the article. General discussion among my colleagues has been nil.

> The department has terminated my employment, though obviously not as a result of the article in the Report. I am one of only a few faculty in the department devoted to teaching full time.

> It has helped me considerably in my battles with the local bureaucrats who too frequently punish rather than reward creative teaching. I suspect mine is a common tale, and that you're helping mightily to push good teaching to the fore, where it belongs.

> Except for a polite "pat on the back," the article was essentially ignored.

And one of the professors very nicely captured the essence of all this activity: "It seems to me that one major effect of the Reports may not be the expected one—that we will be able to take over each other's successful courses—but rather that we will be helped to be more self-conscious of what we do in the classroom, and more critical, which is all to the good."

With the continued support of the federal Fund for the Improvement of Postsecondary Education, we hope to be able to undertake a third and final year of the program. We propose to look at teaching in physics, anthropology, and foreign languages, and finally in the sixth Report to attempt the awesome task of analyzing a few of the many interesting new interdisciplinary programs. Assisting us would be the Association of Departments of Foreign Languages of the Modern Language Association along with the American Council on the Teaching of Foreign Languages and the Association for General and Liberal Studies. We also look forward to the participation of the American Institute of Physics and the American Anthropological Association.

During the third year, we would also attempt to better evaluate the impact of this project on the improvement of teaching. One important resource will be the various teaching centers and faculty programs that are making active use of the Reports as a series. They are our eyes and ears on campus and only through them can we take that elusive pulse of academe and more systematically examine whether this enterprise has merited the effort expended by so many.

As always, we would appreciate hearing your reaction to the Report.—*J.L.S*

DOES ANYBODY CARE?

by L. Richard Meeth

Even though concern about the improvement of instruction occupies a great amount of the time and energy of many faculty and administrators, and articles about faculty development that focus on improving teaching and learning fill the current publications in American higher education, there is still reason to believe that very few people genuinely care. No one can question the quantity of rhetoric or the extent of activity. The real question, as always, is: Does improved teaching really count?

At least two recent analyses suggest that it does not. In a survey entitled *Assessing Faculty Performance* (Teaching Research Division, Oregon State System of Higher Education, November 1976), conducted among all faculty in the Oregon system of higher education, college faculty listed as the most important factors for promotion: advanced degrees, department chairman evaluations, time in academic rank, and personality traits. Among university faculty the list was similar: publications, department chairman evaluations, school/department committee evaluations, and student ratings. College faculty agreed with university faculty that factors affecting promotion had least to do with evidence about teaching such as evaluation of course syllabi, formal colleague appraisals, and—receiving the lowest score of all—evidence of student learning.

In a similar study at the University of Nebraska in 1975-76, Patricia Cross discovered that of the nine possible criteria for promotion, the number of publications was considered the most important, and only 28 percent of faculty were willing to have colleagues visit their classes. In fact, Cross found that the Nebraska faculty did not see much need for improving instruction, since 94 percent rated themselves above-average teachers and 64 percent placed themselves in the top quarter of Nebraska faculty in teaching.

Here is evidence from two recent sources that appears to be representative of the nation as a whole. When the judgments are made, teaching does not seem to be among the critical criteria used to reward faculty behavior.

There is another side to this concern. Faculty at both Nebraska and Oregon, when they were asked specifically about improving instruction, expressed a strong commitment to teaching. Most studies that focus exclusively on teaching disclose evidence of a desire on the part of faculty to have teaching count as much as research and publication in the reward system. But as Cross points out, "Faculty members revert to the old standbys of clear rewards, smaller classes, reduced class loads, better facilities, and released time as the most effective ways to improve teaching." In her study, faculty rated at the low end of the scale such techniques as on-campus teaching seminars, workshops run by experts in teaching and learning, required training for new faculty members, and the publication of a newsletter about teaching innovations. She concludes, "The favored suggestions almost always involved something that 'someone else should do about teaching,' whereas the unpopular suggestions involved commitment of time and energy from the faculty members themselves."* Thus it would appear that even when faculty are committed to improvement of

L. RICHARD MEETH directs the Change Magazine Project on Undergraduate Teaching. He also teaches at the State University of New York at Buffalo.

teaching, the commitment does not always extend to active personal involvement which, of course, is a deeper, more significant level of caring.

Our experience in publishing these Reports on Teaching parallels the empirical studies. Innumerable persons identified by disciplinary associations as able teachers working at improving their instruction refused to be included in the reports because, as one expressed it for all of them, "It would not do me any good in the eyes of the department or the administration when I come up for tenure." At times it seems as though good teaching may indeed be a concern: Faculty are concerned that no one know about it, that it not become part of the criteria used in the reward system in many higher educational institutions.

If improved teaching is not actually important in rewarding faculty nor desired by faculty—either because they see themselves as already effective or because they do not want to be actively involved—then the possibility of any great change resulting from the national focus on improved instruction grows increasingly remote.

In a sense the problem is confounded by the concern. By and large, the studies of improved instruction have focused on methodologies for bringing about change rather than on criteria by which improved instruction might be determined. Defining and agreeing to definitions of improved instruction seem to be activities that normally occur before the methods are set. They can be accomplished, particularly within departments and schools, but even some major universities have been successful at reaching consensus on the meaning of improved teaching. Once the outcomes are established and the criteria for reaching them are concisely set forth, the methodologies to be used for finding out whether or not instruction is improved fall into place. In education as in architecture, Frank Lloyd Wright had something to offer when he said: "Form follows function."

Perhaps, then, part of the reason why too few educators seem to care about improvement of teaching is that the emphasis has been too much on process and not enough on outcome; form has preceded function in nearly all studies. While function may be more difficult to agree upon, once it is in place it engenders much more genuine discussion and results in much firmer commitment than do methodologies. We might care more about improved teaching if we knew that we were all talking about the same thing, and that the ways of determining it in ourselves followed from a prior determination of the thing itself.

The problem of commitment is also confused by the techniques used to evaluate improved teaching. The "Profile of a Professional" in this issue represents a new approach to describing a real teacher judged by her peers and students to be effective. The way she functions defines quality teaching, and her methods flow from her understanding of what she is about. If teaching is an art and not a science, perhaps case studies such as this one would be more effective than student and peer check lists for assessing improved teaching. They would be more personal, more comprehensive, and more humane—thereby increasing the possibility of commitment to teaching. □

*K. Patricia Cross, "Not Can, But Will College Teaching Be Improved?" in John A. Centra, ed., *Renewing and Evaluating Teaching*. San Francisco: Jossey-Bass, New Directions for Higher Education, No. 17, Spring 1977, p. 13.

PROFILE OF A PROFESSIONAL

by John Egerton

Ruth Harriet Jacobs was 40 years old when she earned her bachelor's degree and 45 when she completed her PhD. She was a late arrival to academia—and in the highly specialized and intensely competitive world of professorial life she might have been considered a poor bet for survival, not to say success. But for all her lateness, the timing of Ruth Jacobs was very nearly perfect. Since she joined the Boston University faculty in 1969, teaching has regained some of its lost prestige vis-à-vis research, women have begun to receive greater equity in higher education, and the abstract character of the college experience has been tempered by the need for utilitarian skills.

As a woman, a mother, a former journalist, an enthusiastic teacher, and a veteran practitioner of the art and science of survival, Jacobs was just in time to become one of BU's outstanding professors—tenured after only four years, twice nominated by her colleagues for the University's excellence-in-teaching award, a productive researcher and writer, and a favorite with students. "I'm lucky to have come into teaching late," she says. "I haven't had time to become bored or stale. To me, teaching is as creative an experience as writing poetry. Sometimes I worry about being able to keep up with my students, to keep meeting their needs as I grow older—but I'm a compulsive worker, I have a lot of energy, and I really like the demands and challenges of teaching. It's still a new career for me, and I don't like to think that in 12 more years I may have to retire from it."

JOHN EGERTON is a freelance writer based in Nashville, Tennessee.

Jacobs calls teaching "my third full-time career—after journalism and motherhood." Following her graduation from high school during World War II, she went to work for the Boston *Herald-Traveler* as a copy girl and quickly advanced to reporter. She wrote about subjects ranging from prisons to politics, and interviewed such luminaries as Winston Churchill, Dwight Eisenhower, and Harry Truman. She was married in 1948 and gave up her job the following year to raise a family. When her youngest child was in nursery school, Jacobs enrolled at Boston University; she wanted to become a high school teacher or perhaps a social worker. After graduating with honors in 1964, she was admitted to the PhD program in sociology at Brandeis University and by 1969 was well launched on her third career. During graduate school she gained teaching experience in a high school, a hospital school of nursing, and a community college. She studied under Everett Hughes and others at Brandeis, wrote her dissertation on the problems of affluent young people in a suburban high school ("Adolescents in Utopia"), and began to blend her journalistic skills with the requisites of her new profession. Soon after completing her doctorate she joined the sociology faculty at her alma mater, Boston University.

"I felt very fortunate to have arrived at that point in the way I had," she recalls. "Everett Hughes used to say, 'To be a good sociologist, you should first have been something else.' I was a new college professor, but I'd had excellent training and experience in writing and in teaching—two things professors are expected to know but are not taught to do. I had also had the ex-

perience of raising children, and that, too, is good preparation for a professor. And at 45, I was a mature woman with a lot of enthusiasm for the new challenge I faced. After a very deprived childhood (my mother died when I was 10, and my younger brother and I were raised by our maternal grandparents, who were Russian immigrants), I had been fortunate to have a succession of experiences which added up to ideal preparation for the career I began in middle age."

In eight years at BU, Jacobs has pursued a variety of interests in teaching and research. She has taught as many as 600 freshmen at once in introductory lecture sessions and supervised doctoral dissertation work on a one-to-one basis. She has handled required courses in field-work methods and social theory, and elective courses in such subjects as the family, war and peace, the community, women's issues, and aging. She has conducted interdisciplinary seminars and devised a special course to explore social problems in a high-rise campus residence hall housing 1,650 students.

In the area of research, she has published more than 20 articles in scholarly and popular journals and has just coauthored a book, *Re-Engagement in Later Life*, with Barbara Vinick, one of her former students. She also has been a speaker at numerous professional meetings and forums, making some 35 oral presentations since 1970. In addition, Jacobs regularly supervises both undergraduate and graduate teaching fellows and serves on a number of committees and boards in the University and the city. For the past two years she has been an assistant dean of the BU College of Liberal Arts, spending a minimum of one day a week as a counselor to undergraduate students. As if that were not enough, she writes poetry in her spare time. "I don't require a lot of sleep," she explains.

Jacobs lives alone near the campus in an apartment overlooking the Charles River. Both there and in her departmental office, the accoutrements of her consuming interest as a professor are abundantly evident: bulging bookshelves, piles of magazines and journals, scattered stacks of file folders, cluttered desks, a collection of Halloween masks for use in improvisation and role playing. She teaches an evening class in her apartment once a week, and the teaching assistants under her supervision meet there regularly.

"I work here the same as I do in my office, or in a classroom, or in the dean's office," she says. "You could say I spend practically all my time teaching; everything I do is teaching. Even in the women's support group I belong to, or the Gray Panthers' potluck suppers I attend, or my Jewish community center involvement, I often take some of my students along. My best teaching is not done in lectures—it's in the way I answer the spontaneous questions of students, in the experiences I expose them to, in the things that come welling up out of the subconscious. I have a very personal style of teaching. It's not the only way to teach, but it's my way."

Boston University Photo Service

Ruth Jacobs

"I'm lucky to have come into teaching late. I haven't had time to become bored or stale. To me, teaching is as creative an experience as writing poetry.

Many of her students call her by her first name, and on every course syllabus she provides her home telephone number—with the caution that callers should not ring her after 10 p.m. Though she teaches graduate students and adults, she has a special interest in undergraduates, particularly freshmen. "That's where you win them or lose them," she says. "They're harder to teach and they take more time, but it's very rewarding. It's exciting to follow young people through four years of college, to see them grow and change. The skill of teaching is in being able to reach kids who need you. There's less challenge in the ones who already know everything." In her personal approach to teaching, Jacobs begins each of her courses with a student questionnaire. "I want to learn who they are and what they're like, individually and as a group," she says. "When I know their names and their handwriting and have some personal information about them, I'm better able to be sensitive to their needs."

Peer teaching, working together in small groups, the application of theory to practice, and frequent field work are approaches Jacobs considers essential and uses freely. "Getting people to work together is one of the hardest things a teacher has to do," she observes, "and one of the most important. It distresses me to see students hoarding what they know in order to gain a competitive advantage." Her approach to the use of students as teaching assistants is that of a supervisor, a teacher of teachers, and a fellow learner: "I give them a lot of responsibility, but I don't leave them to fend for themselves. We work together."

The current emphasis on applied sociology and career-oriented studies presents no conflict for Jacobs, who says simply that all knowledge is useful and that learning by doing is an effective way to grow. Her department has published a booklet she wrote, called "Thirty Ways to Get a Job with a BA in Sociology." She frequently involves her students as participant/observers in field-work projects, telling them that "if you study somebody [e.g., the residents of a nursing home], you have a responsibility to give them something in return in the form of volunteer help."

Jacobs asks her students to evaluate course content and the quality of her teaching. "It's their class," she says, "not mine. I think you learn to be a good teacher by listening to students." Midway in the term she distributes an evaluation sheet in each of her classes and then scrambles the anonymous returns and has them read aloud. "I arrange the students' comments in categories on the blackboard," she adds, "partly as a means of teaching them techniques of content analysis. Then, when the evaluations reveal problems that need attention, we decide together what changes should be made."

University-wide course evaluations gathered and published by students, a tradition at BU, confirm Jacobs's reputation as an outstanding teacher. A few students say she is "overbearing" or "repetitive" or "boring" or "highly unstructured" or "a bit too maternal"—but an overwhelming majority compliment her highly. She is praised as "a fair, intelligent, loving person" who "cares about her students as people," a "stimulating instructor who knows her material inside and out," a person who "really makes the subject come alive" and who is "very dedicated, enthusiastic, and an excellent teacher." One student wrote: "Ruth Jacobs has developed a reputation as one of the best, most interested, and most concerned professors on the campus for good reason—she is!" She has been most repeatedly praised for "her devotion to students." As one of them put it, "She's concerned like a mother for her students."

Jacobs's Jewish-mother image is reinforced by such customs as inviting a class to her apartment for refreshments and socializing, or having a potluck supper in the sociology department for a group of students. She frequently sends students on to graduate school or jobs armed with glowing letters of reference, and she goes when invited—which is often—to their parties, concerts, and weddings. In class, she is quick to praise students for work well done, and she sometimes invites former students back to talk to her classes, providing "role models of success." Her method of grading is an A-to-D curve, with F's meted out only as a last resort to students who show no evidence of effort. "I'd rather see a student withdraw from a course than fail it," she says.

Ruth Jacobs on Teaching

About a week before an exam, I ask students to write their own exam questions. Then I sort them and try to combine them into questions that reflect students' interests. I always use essay exams – it's a lot of work to grade them, but I think students need to write. I comment extensively on their exams and read to the class some good and some bad answers – without, of course, identifying the students who wrote them. I don't change grades once exams are returned – I do all my agonizing before I return them – but I am always willing to sit down with a student and explain why I graded as I did.

I often give students outlines of my lectures so that they may concentrate on what I say rather than worry about taking notes. I do lecture. Despite current trends, I find that students like some carefully prepared lectures where they see you work out a problem before their eyes.

I try not to confuse my students by assigning work that is over their heads. Too many professors fresh from graduate school assign the stuff over which they have just labored. Find out what the admissions standards are at your college and assign reading that all your students can understand. Add enrichment for the brighter students.

I change courses when I get bored. Sometimes I must force myself to change. Right now, for example, I've been teaching social theory for about five years – and I know I should switch so that things will be as new and exciting to me as to my students. So, I am developing a new course, even though I know I will miss the theory.

I try to get away from being the authority figure. I try to build self-confidence, so I wait it out if a student is slow to find a field site. It is tempting to rush in and tell a student what to research, but I have learned that they learn by struggling. When I think a class isn't going properly, I'll ask the students what's wrong. They don't always know, but when they do you can save a lot of time.

I present myself as a person, as a woman, and not just as a sociologist. I think it helps students groping with their own identities to know that I have had three careers: as a journalist, as a full-time mother, and now as a sociologist. Then they don't regard it as such a tragedy if they decide to switch majors or to wait for a while before they enter graduate school.

The spirit of openness she exhibits toward her students also characterizes Jacobs's approach to colleagues. She has invited them to visit her classes and has offered to exchange course syllabi. For two years she held Friday afternoon "sherry and sharing" sessions in her office. "Most of those who came to talk were junior faculty," she recalls. "The get-togethers were very helpful to me—and, I think, to them too. Teaching is a lonely profession. A faculty is, in a way, like an unconnected cluster of private entrepreneurships. I sometimes think it's too private. We need to talk to one another more. If I'm not exchanging ideas with colleagues, I go stale."

After she had been at BU for four years, Jacobs decided to request tenure. She reasoned that at her age—she was then 48—it would be better to gamble for permanent status ahead of schedule than to wait. Her request was approved, but not unanimously. "Some senior faculty members may have felt that my publications were not scholarly enough, or that I spent too much time with students, or simply that I had not been here long enough. In the end, though, it worked out well for me. I feel comfortable here. This is a faculty of diverse styles and interests, and that's good. There is no one way to teach."

> *"Getting people to work together is one of the hardest things a teacher has to do, and one of the most important. It distresses me to see students hoarding what they know in order to gain a competitive advantage.*

Beyond the loyalty she feels for her discipline and for the sociology faculty to which she belongs, Jacobs also expresses, as an alumna, a kinship to Boston University. "I'm what's known as a local," she says. "I'm a native Bostonian, and this is my University. It's the place I want to be. I've given a lot of time and effort to the University because of that."

Next year, with a National Science Foundation faculty fellowship, Jacobs will take sabbatical leave to pursue interdisciplinary studies in gerontology, a field in which her interest has steadily grown. Appropriately, her book *Re-Engagement in Later Life* deals with problems of transition for people over 65. Having made some important transitions of her own, she brings a special talent to the subject for the young and old alike. She views her forthcoming project as a new direction, a challenge "to keep me from becoming stuffy." □

"Teaching is a lonely profession," says Jacobs. "A faculty is like an unconnected cluster of private entrepreneurships. We need to talk to one another more."

GEOGRAPHY

CHANGE IN GEOGRAPHY: THE DOING DIMENSION

by William D. Pattison and Salvatore J. Natoli

You mean they teach geography in college? Yes, they do, but much of it is far from the geography most people think of when they hear the word. To talk with even a few of the several thousand academic geographers in American higher education is to discover one of the most dramatically recreated components of the curriculum. The great changeover in the field, in progress for many years, can be attributed mainly to a shift in primary purpose from *knowing* geography as a body of facts to *doing* geography, as research, creative interpretation, and planning for a better future. (Essentially the same distinction is made by a writer for the National Science Foundation in "In This Issue," *Mosaic*, March/April 1977.)

The energy released by this shift has produced an expansion of scope and a striking diversification of interests, leading one pundit in the field to suggest, "Geography is a Los Angeles among academic cities in that it spreads over a very large area, it merges with its neighbors, and we have a hard time finding the central business district." Another prominent geographer, Edward Taaffe, has proposed that the range and internal variety of the discipline can be reduced to the outcome of three defining views: geography as a study of spatial organization, a study of relations between people and the environment, or an integrating regional study. He has argued that work in both human and physical geography can be understood in these terms.

Although it is true that the three conceptions can be found in the familiar tradition of geography as facts to be known, it is in geography-as-doing that they are fully operable frames of reference; and within them, one can interpret the kinds of teaching presented in this Report. To say this much is not enough, since the frames give little evidence of the innovative directions in which geography-as-doing has been headed. Six of these directions are illustrated by the following articles. Each case of teaching is meant to bring one or more of the directions to life, not to stand as an exemplar of what is worthiest or best regarded in the contemporary classroom.

Beyond the discoverable. Whereas geography still has an obligation to report on what can be confirmed by direct observation, a new geography was born when many began to structure their work from hypothetical conditions or theoretical models. An example is the employment of central place theory, in which the location of urban places relative to one another is developed wholly from a set of assumptions. From such change has come a classroom geography of strict logic, statistical inference, and computer-based inquiry, demonstrated by a generation of geographers and now renewed and extended by Eugene Ziegler of Colgate University in New York State.

Beyond the functional. If there is one principle by which the general public knows geography, it is that of emphasis—in human affairs—on what works. Although any tendency among geographers to imply that everything is okay has received theoretical support and even a degree of justification from the prevailing functionalism of American social science, it has been countered effectively by an awareness of environmental damage and mismanagement that goes back as far as geography's emergence as a research field. Carrying this awareness into the present, augmented by the spirit of the environmental crusade, many geographers discuss—and protest—wrong action and its

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consequences, as a part of their teaching. Peter Kakela of Sangamon State University in Illinois is representative of them.

Beyond the objective. Not long ago nonobjective content for geography would have seemed to be a contradiction in terms; today most geographers would not recognize their field without it. In pursuing their still new subjective interest, some geographers have ventured to take an idealistic position, striving to "think themselves into" human actions that have geographical significance; others have actively developed the concept of perception that has now diffused among the social sciences. To the latter orientation, especially as it applies to the place preferences of students, Peter Gould of Pennsylvania State University has been a significant contributor.

Beyond the cognitive. Quite possibly, the attention given the novel *Good Morning, Miss Dove* several years ago arose from the seeming paradox of a geography teacher with feelings. Nevertheless, personal values and emotional states have gained a place in college geography recently, marking a departure from tradition and adding another reason for students to alter their opinions of the field. Of the geographers who have joined in exploring the affective domain, a few have made of it a subject of essentially academic study and reflection, whereas others have made it into something quite different: a reconstruction of their relations with students. The latter response is illustrated by the "free and humanistic learning community" planned for the geology/geography program at St. Lawrence University in New York State.

Beyond the vicarious. It is tempting to insist that as history speaks of what is unavailable because of being past, so geography speaks of what is unavailable because of being far away. One must admit that some geography teaching has lent credibility to this idea, at times turning geographic education into vicarious travel. The fact is that geography-as-doing has taken the interpretation of directly encountered reality as an educational challenge. The ideal of the college without walls, in which learning draws upon experience, has always been present in the aspirations of disciplinary geography. The practice of field teaching as integral to geographic learning has declined over the past two decades or more, but it is returning. David Lanegran's urban course at Macalester College in Minnesota exemplifies this comeback.

Beyond the received. Not the least persistent of impressions is that geographic learning is necessarily reception learning, that geography ends once a teacher's messages have been received. Applied geography—the geographer's reasoned intervention in the world as found—denies this view. Its effects on teaching, having grown gradually for many years, are sharply on the increase. Geography as place planning or place managing is highly conducive to role playing in the classroom, to workshops and practical exercises, and generally to active learning. Rather than ending with reception of the teacher's messages, it begins there. Illustrations of planner's geography come from Carroll College in Wisconsin and from San Diego State University in California.

The tradition of geography as a world to be known has been changing too, as illustrated by Alan DeLucia's course at the University of Idaho, which emphasizes study problems, and Paul English's course at the University of Texas at Austin, which reaches out to students through a remarkable media array. These efforts indicate some of the ways geography has become a creative learning experience rather than a subject imprisoned between the covers of a textbook. □

EXPANDING THE BOUNDARIES OF GEOGRAPHY

by Peter Binzen

Hamilton is a picture-postcard village at the northern end of the Chenango Valley in upstate New York. In an atlas you will find it at about 75 degrees west longitude and close to 43 degrees north latitude. It is 1,126 feet above sea level and its annual precipitation averages 34 inches. It has cold winters and warm to cool summers. Its prevailing winds are from the west and northwest. Its growing season is five to five and a half months. Its 1975 census showed 2,500 villagers and 2,516 Colgate University students. It is 182 years old.

Eugene L. Ziegler, age 37, lives in Hamilton and seems to know just about everybody there. Driving around the village in his battered station wagon, he is forever taking one hand off the wheel to wave to a friend or acquaintance. But although Ziegler is a Colgate geographer (PhD, Penn State), he might flunk a geography quiz based on the data cited above. He has basic concepts in his head. He will tell you, for example, that Hamilton is located in a watershed divide, and that if three glasses of water were spilled at three different points in and around the village, their contents might flow in three different directions—one eventually emptying into the Susquehanna River, a second into the Hudson, and a third into the Delaware. But Ziegler is the first to admit that he is "very poor in the geographer's traditional role as a walking inventory of world facts." He just doesn't see the sense of storing all these facts in his own brain when they can be retrieved so easily and quickly from the University's computer.

The computer. Now that's something else. Ziegler is devoted to it. Colgate owns and operates a Digital Equipment Corp. DECsystem-10 (PDP-10) time-sharing computer that supports 24 CRT video terminals in its computer center and in satellite centers across the campus. The center is unusual in three respects: (1) it is solely an instructional computer, that is, no administrative data processing is done on the machine; (2) students have virtually unlimited access to the computer at all hours of the day and night; and (3) computer use is free—there is no accounting system. Before Ziegler came along in 1971, nobody had thought of hooking Colgate's geography courses into its superb computer system. Colgate was one of the first universities in America to offer undergraduate courses in geography and it is said to have the longest record for continuous offerings in the field.

Ziegler holds a joint appointment in geography and computer science. His background, both personally and academically, is a bit unusual. Originally from a working-class family in Allentown, Pennsylvania, he spent three years in the Army and at one point dropped out of college for two years to work as an industrial engineer on the assembly line at the Mack Truck plant in Allentown. As a Penn State undergraduate he started out with a concentration in science and engineering. A friend steered him into geography and he was strongly influenced by Penn State's English-born geographer, Peter Gould. Along the way, Ziegler "picked up quite a bit of computer science."

At the time of his joint appointment at Colgate, Ziegler was given a free hand by the geography department chairman, Theodore Herman, to design his own teaching program and select all of his own teaching materials. Ziegler was convinced that "to justify its existence in college, geography must go beyond the basic facts about lakes, rivers, and mountain ranges." He set about fashion-

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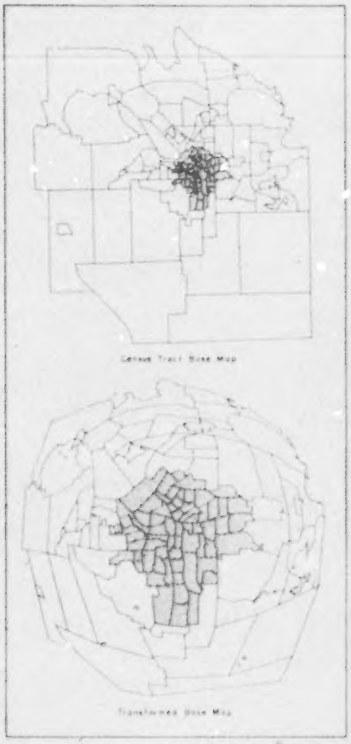
Dick Broussard



Ziegler and students work at one of Colgate's many computer terminals. At left is an example of a base map transformation for a census tract map.

ing courses that would blend hard and soft sciences into a new methodology.

His special interest is urban geography and his courses reflect that interest. His students study math, statistics, and systems theory. He teaches them computer programming and geographic data processing. His field laboratory is the city of Syracuse, about 50 miles northwest of Hamilton. He sees geography as a "spatial science" and he has his students examine systems and problems in Syracuse from the viewpoint of that science. One result of his emphasis on computer work is that in 1976 the geography department was the single-largest user of instructional computer time, with the exception of the computer science department. And this spring Ziegler helped teach a course in Computers, Science, and Society while also giving courses in Metropolitan Analysis and Computer Applications in the Social Sciences.

A striking example of Ziegler's use of the Colgate computer to teach "spatial science" is his transformation of a conventional census tract base map into something quite different. In this case, the map is of Onondaga County, with Syracuse the hub. The conventional map, which Ziegler's students see first on the computer screen, shows the city as a very small central core in the large county. This map accurately depicts the relationship of Syracuse to Onondaga County as measured by square miles. In another sense, however, the conventional map is a gross distortion. Because the suburbs occupy far more land than does the city, they appear to dominate it. The map fails to take into account the city's domination of the suburbs in gross metropolitan product; in sports and cultural activities; in financial, commercial, and industrial matters; or in population concentration.

Learning experience:
Introduction to Modern Geography. No prerequisites. Enrollment: 35.

Other descriptions:
For a helpful reference see *Spatial Organization: A Geographer's View of the World* by Ronald Abler, et al. Englewood Cliffs, N.J.: Prentice-Hall, 1970.

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What Ziegler has done, therefore, is to make areas on this map reflect population densities rather than square miles. City neighborhoods with 3,500 residents, which seem microscopic on the conventional base map, take on greater significance. The city of Syracuse gets a "bigger share of the visual impact" when students call up the map on the terminal. Conversely, low-population farm townships in the far reaches of the county are shrunk in size.

Another example of the kind of distortion Ziegler seeks to correct would be a map of the United States showing the electoral vote for President. On the conventional map, Nevada, with 110,540 square miles but only three electoral votes, would appear more than twice as large as New York State (49,576 square miles but 43 electoral votes). For an accurate representation of the nation's electoral vote, Nevada should shrink to less than half New York's size. "I've moved away from talking about distance," says Ziegler. "We are generating a relative space—a people space. We try

to define space in terms of the people who occupy it."

His approach brings Ziegler and his students into areas of economics, political science, and history. He wants his students to view geography as a science. To hammer that point home in an introductory course, he regularly appears for his first lecture wearing a white laboratory smock and carrying a Bunsen burner, a beaker, and a scale. The titles of his students' papers show the interdisciplinary nature of urban geography. They include: "A Computer Model Simulating Black Population Growth in Syracuse, N.Y., 1960-1970"; "A Study Into the Effect of the Intra-City Highway System of Syracuse, 1960-1970"; "The Suburban Apartment Boom, Syracuse." And Ziegler's doctoral dissertation, which he successfully defended in December 1976 and which is now cranked into his computer, was entitled: "Models of Urban Spatial Structure: The Case of Intra-Urban Migration."

As Ziegler sees it, geographers can get into almost any area involving people. "A lot of geographers are looking at health service distributing systems," he says. "Some are into criminal justice problems, looking at census data for patterns in high crime areas. School segregation represents a geographic distribution of children in school. School busing is a geographic solution—not the ideal one. All of these studies involve analyses of geographic space. But merely collecting information and describing it is pre-science. Geography must move into the normalized state of science where one structures information and looks at dysfunctional geographic systems."

In all of this, says Ziegler, "computers can do the dirty work. But they also open ways to do things that man doesn't have the tolerance or even the capability to do unaided. I'm not in computers for their own sake. I see them as a way to get things done, a very powerful tool."

Many geography departments offering traditional courses have had difficulty attracting top students to major in the field and do graduate work in it. Chairman Herman says Colgate's department has to a large extent overcome that problem. And he gives much of the credit to Ziegler. "As a classical geographer," says Herman, whose specialty is China and East Asia, "I am delighted to have a person whose method differs from the way I operate. That enriches the department. The students are richer for it. We swap ideas and learn from each other. We're not fighting for disciples. Both of us are very interdisciplinary—personally and professionally."

When Ziegler arrived at Colgate, just two students were majoring in geography. Today the number has risen to 20 and total class enrollments in geography also have climbed. "We have a growing number of students—good students compared to 10 or 15 years ago," Herman says. "In those days they took geography because they thought it was easy. Now it's different. Gene's excited them. And our concentrators are going into planning, government, business—using their geography—and going to top graduate schools."

Colgate's three-man geography department (the third member, A. Rees Clark, also uses computers) remains one of the University's smallest. And that may explain why those students who have opted for it are such zealots. "I thought I'd be a sociology or anthropology major," said Nancy Murdock, a graduating senior from Philadelphia. "I didn't even know Colgate had a geography department. But I took a course in geography and then another and another. Now I've taken all 14 courses the department offers. I got turned on to it. Maybe I think spatially—in terms of space as well as time."

Alfred Sive, a junior, transferred to Colgate from a New England university with one of the largest geography departments in the United States—over 20 on its geography faculty. Like the other geography majors at Colgate, he is sold on the department and on Ziegler. "There are advantages in a big department but some in small ones, too," he said. "Here we have a tremendous commitment of faculty and students. There is an intimacy and cooperation that must be very rare. Ziegler is a tremendous resource for people and ideas." Even at Colgate, though, the word has not circulated to the entire student body. "A lot of people still don't know about it," said Sive, referring to the quality of the geography department.

Better Environment, Better Learning

If nonrefillable beverage containers have been outlawed in Illinois by the time this is in print, much of the credit will belong to students in Peter Kakela's course Citizen's Action in Environmental Affairs, at Sangamon State University in Springfield. An associate professor of geography, Kakela wanted to get away from the teaching pattern he thought had been established in recent years. "Traditionally," he explains, "we did a much better job of interrelating people and their environments. But with the trend toward specialized study, modern geographers have tended to be either physical or human geographers. The classic man-land theme has been seriously neglected since environmental determinism was refuted."

Kakela wanted to provide a 1970s equivalent of the field work he found so valuable as a student. He had spent summers working on glaciers; now his students go into the public policy arena for their environmental learning experience. Inspired by a stint as technical aide to the Energy Crisis Investigating Committee of the Illinois House of Representatives, Kakela believed students could learn while contributing to a better environment by becoming involved in the legislative process.

Open to undergraduate and graduate students, the citizen's action course works this way: Students choose an environmental bill from several suggested by Kakela that are currently before the legislature. The class of six may either work as a group or concentrate on two or three different bills. They research the matter, observe committee and floor action, prepare projects, such as the drafting of testimony, study agency and vested interest group opinions, and write an analysis of the issue and the legislative process as applied to it. Students also grade themselves (Kakela will negotiate if his grade differs) and write evaluations of the course.

In the fall of 1975, for example, the class chose a bill that would mandate a return to refillable deposit bottles. After studying books on environmental action and material from the Environmental Protection Agency data bank on all aspects of the bottle issue, they prepared a detailed fact sheet ("It's the Drink That Counts!")

"People still see geography as memorizing lakes, rivers, and mountain ranges."

Susan Strathmeyer, a junior, took a computer science course concurrently with a geography course—both taught by Ziegler. In her view a blending of the two disciplines makes sense. "The romance [of traditional geography] isn't lost," she said. "We have become trained observers and there is now the excitement of finding in the real world things we have seen in the classroom and in our computer analysis: how a transit system works, why a drugstore is located on a corner, what influences boundaries have on the lives of people. Urban geography is a challenge. It gets you into so many subject areas."

Students who examined the "spatial distribution of [urban] riots" for one of Ziegler's courses concluded that much of the rioting occurred at points where lower class people and working-class people came into contact with one another. "Simple geographic models can tell you that much," said Sive, "but they can't give answers as to why the riots occurred. When you get to the why, geography interacts with sociology."

While Eugene Ziegler gets high marks from his students and from his department chairman, his progress up Colgate's promotional ladder has been slow. After six years he still lacks tenure and his prospects of gaining it appear slim. He'll be heading the computer center staff next fall but may not be teaching urban geography.

"There's a lot of pressure to publish and do research," said Ziegler. "Not more than 55 percent of Colgate's faculty can be tenured. Right now, there are 10 of us in a pool for 3 slots. Tension has mounted. As the market tightens, mobility declines. The school is better able to attract and hold a topflight faculty. The classic model is publish or perish. Teaching does not count for what it once did. Young faculty members today are scrambling to publish—locking themselves away from students." One student says Ziegler's "publishing record is in the computer. But it doesn't count."

Peter Gould, Ziegler's mentor at Penn State, once wrote that a university "does its best to partition knowledge into little and frequently jealous fiefdoms." "This is generally true," said Ziegler from his vantage point at Colgate. "It is difficult to generate enthusiasm for interdisciplinary programs. It's better to specialize and publish like the devil. Interdisciplinary programs are not part of the payoff."

But Ziegler thinks Colgate's small geography department has won the respect of its academic peers. "Geography has to fight against its reputation as a soft member of the social sciences," he said. "I think we've done that. We've gotten some really strong students, tough-minded kids. Our graduates are finding jobs where they can apply the skills and learning acquired here. The feedback we get is good. What I teach," Ziegler concluded, "is methodology, problem solving in a variety of geographic contexts. I try to give my students a geographer's special insight into how the world works; to see not only details but systems and relationships." ■

that showed the consumer why refillable bottles are cheaper, less harmful to the land, and more beneficial to employment than throwaways. They also met with representatives from a variety of groups that had strong pro and con interest in the bill: lobbyists, legislators, state agency personnel, industrial representatives, lawyers, and workers. "These talks had the effect of wearing off some naiveté," Kakela notes. "Observing body language and other indications of true feelings, getting a look at what actually goes on behind these issues, is an experience they can't get in the classroom. It changes their reality from the academic context to that of the real world."

Next, projects were developed to gain support for the bill. Two students produced a slide presentation for the local Sierra Club, which they also showed in the hallway of the capitol building during a special hearing on the bottle issue. Others conducted a random telephone survey of Springfield residents' opinions and submitted the results to the legislature. One student did a study comparing cents-per-ounce store prices of refillable and throwaway containers.

When it was voted on in the 1976 session, the bill was placed on interim study. "It was reintroduced and passed in committee this spring," Kakela says, "and I can't claim we're fully responsible; but we've certainly helped to keep it alive." As this was printed, the legislature had not yet taken a final vote.

One indication of the course's impact is that students who selected the bottle bill for study in the fall 1976 semester were so interested in its fate that they went to the capitol building to watch the spring 1977 committee vote. In addition, a professor teaching a seminar in land use policy pointed out the progress of Kakela's class to cheer his own students, who felt pessimistic about the success of a bill they were drafting that would protect farmers whose land abuts urban areas against being taxed on an urban development basis.

The program's most common benefit to students, Kakela believes, is that dealing with a variety of interest groups helps them meet opposing viewpoints and differing interpretations of the same data with greater flexibility. "They learn that what they consider progress is not all one-sided," he reports. "For instance, it came as a revelation to many that if mandating refillable containers creates new jobs, many of these positions would be lower paid and lacking in benefits compared with those in plants that make throwaways."

While acknowledging that Sangamon State's location in the capital is perfect for the citizen's action course, Kakela thinks that even rurally situated institutions could easily adapt it. "I can see it in a community of 5,000," he says. "Students could work on issues before a town council or county planning board—land use affairs, storage or allocation of natural gas, perhaps water supply. In any locality you find policy-making bodies, vested interest groups, and citizens wrestling with environmental questions and trying to make and implement decisions. Becoming involved in this process is what the citizen's action course is all about."

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METAMORPHOSIS OF A GEOLOGY DEPARTMENT

by Charles J. Sugnet

Imagine a geology department where students help select the chairman and where most undergraduate majors have offices of a sort in the geology building. Such a department exists at St. Lawrence University in upstate New York. The geology and geography department there seems actually to be that thing to which so many institutions merely pay lip service: an academic community. At St. Lawrence, students behave as though the department belongs to them as much as to the faculty and administrators; they seem confident, adult. Teaching and learning in this department are part of natural human conversation rather than formal, separable events.

Typically, Bill Elberty, a full professor in the department, opens his office a little after eight, wearing a well-seasoned chamois shirt, dungarees, and rubber moccasins. He sits in front of the desk ("In the old days, I used to sit behind it—sort of a defensive barrier") ready for visitors. A student comes by to report on a dawn trout fishing trip to the St. Regis River and the conversation soon turns to statistical problems involved in taking representative samples for the student's honors thesis. Another student interrupts to offer a theory about the formation of an anomalous rock that has been puzzling them. The conversation is seriously geological for about 15 minutes and then turns back to fishing, the price of coffee, gossip about mutual friends, and attempts to find a commercial use for Vermont slate. By nine o'clock the office is filled with students. Some of them have just been to the northeast regional geology conference in Binghamton, and they offer opinions of the papers delivered there. Some are talking with Elberty, others talk among themselves.

Next door, Bill Romey, a full professor and until recently chairman of the department, sits in a beanbag chair discussing the problems of scientific writing with a few students. Two other students come in to look at one of the journals on Romey's shelf. Elsewhere, students are sorting a large sack of fossils they brought back from North Dakota, comparing them with sketches in a taxonomy book. One student recently discovered a new fossil species and had it named after him.

The atmosphere in this undergraduate department is that of an ideal graduate program: Students work independently on projects that interest them and faculty treat the students like colleagues. Some of this is made possible by the small size and liberal arts orientation of St. Lawrence and by the department's good fortune in having its own building. Some of it is due to what Romey calls the "field ethic" of geology: It's hard to maintain a formal attitude toward your students if you have lived with them in a tent in Kenya or the Cascades. But much of the community atmosphere at St. Lawrence arises from a remarkable series of educational experiments undertaken there in the past five years.

When we think of radical innovations in teaching, we usually think of one teacher propelled by private charisma or by craziness; this teacher's colleagues are likely to regard him with bemused tolerance or with outright hostility. At St. Lawrence, however, an entire department decided to change its approach to teaching, and it undertook a collective pedagogical experiment. Since 1971 the department has tried many new techniques, including doing away with formal courses altogether, evaluating students on the basis of a cumulative portfolio rather than by course grades, and allowing students to evaluate themselves and assign their own grades.

Not all these experiments have been entirely successful. (It would be surprising if they had been.) There has been conflict with the administration and inside the department. The department now offers a mix of instructional modes ranging from the fairly conventional to the extremely unconventional, including a new staff-taught minicourse approach to the introductory geology course. But whether or not the individual innovations have been successful, the history of their introduction and the resulting conflicts tell an important story for those interested in educational change.

During the 1960s the department was a tightly structured, high-quality program presided over by a strong chairman of the old-fashioned variety. The department gave beginning students a colorful exposure to rocks, but also prided itself on its preprofessional character; a high percentage of its students went on to graduate work in geology. By the end of the decade, however, a few problems were apparent. Student expectations had changed, resulting in complaints about the introductory course, and the chairman retired. Elberty, a St. Lawrence graduate and a long-

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time member of the department, believed that the lecture-and-exam method of teaching was not only pointless but actually harmful. Jim Street, then the youngest member of the department, was willing to try something different.

The catalyst was Bill Romey, who joined the department as chairman in 1972. Romey's education was unusual for a geologist: He had majored in French at Indiana and had done graduate work in France before taking his PhD in geology at Berkeley. His first job was a joint appointment in geology and science education at Syracuse, where he published several research papers in petrology. He also developed his interest in education and wrote a book, *Inquiry Techniques for Teaching Science*. In light of Romey's more recent teaching and writing, the techniques this book advocates seem heavily programmed, but the insistence on an active, responsible learner, which is at the heart of the St. Lawrence program, was there.

One characteristic of Romey's approach is that he has always been willing to follow his convictions to their logical conclusions. In *Inquiry Techniques*, for example, he describes the progress of the science education course at Syracuse: "At first, my colleagues and I taught it as a lecture course. In a short while we were convinced that our goal of encouraging the use of discovery techniques of teaching and learning could hardly be reached by practicing the opposite of what we preached." As he taught, he became convinced that knowledge gained through free inquiry was learned more thoroughly and was retained longer than knowledge received passively in conventional classes. Moreover, the very idea of a course, with its fixed time frame and uniform subject matter for all students, began to seem inimical to the organic way in which learning actually happens.

Romey also became more acutely aware of the negative consequences of the traditional grading system, which enables students to avoid responsibility for planning and evaluating their own learning and keeps them adolescent by making the teacher into a pseudoparental director and evaluator. Grades, he concluded, made free exchange between students and teachers impossible and replaced real conversation with games, some subtle, some crude. He saw several simple ways to avoid these problems: Don't give grades; put everyone on pass/fail; let the students grade themselves; give everyone an A at the outset. Any of these would do, just so there was less emphasis on grades, less talking and worrying about them.

Because of his growing interest in education and his desire to put some of his ideas into practice, Romey left the security of his position at Syracuse in the late 1960s for a job with the federally funded Earth Science Educational Program in Boulder, Colorado. He became director of the program, but he knew the job would be temporary, so he sought affiliation with an interesting geology department.

When St. Lawrence asked him to apply for the chairmanship, he stipulated that he would want to make some fundamental changes. To his surprise, there was strong support, both in the department and in the University president's office, for the things he wanted to try. In spring 1971 he accepted the job. He still had a year's work to complete in Boulder, so it was decided that Elberty would be chairman for 1971-72, Romey would commute frequently to St. Lawrence, and they would begin the new program immediately. At the same time the department added two new assistant professors who were interested in experimental teaching: Mark Erickson (paleontology) and Russ Jacoby (mineralogy and petrology).

The plan was to shift to much more individually contracted work and eventually most of the department's course numbers in the catalog were relabeled simply Projects in Geology or Projects in Geography. Students were to maintain a portfolio containing evidence of achievement they regarded as relevant (brief reports of reading or field work, letters from faculty, journals, photographs). Permission to major in geology would be extended by a joint student/faculty committee after it had examined an applicant's portfolio. Majors would be advised annually by professional geologists from outside the University on the quality of their portfolios, and students would evaluate themselves in consultation with faculty. Registration would be as free as possible, so that a student could change project advisors as his or her interests changed. The terms geology and geography would be given the widest possible interpretation; intelligent interests could be pursued without fussing over disciplinary boundaries.

Although courses were to be avoided, there would be scheduled, announced events such as lectures, films, and field trips open to the geology community and not necessarily connected with any particular course number or group of registrants. (Since most faculty are involved with a research site, students do field work in New York, North Dakota, Kenya, and the Pacific Coast range of the U.S. The department also is in close contact with a large number of its alumni, who provide further contact with the world of professional geology.)

By fall 1972 the department had totally dismantled course structures and simply printed a notice in the class bulletin: "To be arranged—see instructor." Students and teachers met in small groups over lunch, in their offices, on nearby rock outcroppings. If a group wanted to stop meeting, this was regarded as a sign that it had exhausted interest in its topic and should be dissolved and reconstituted. If some students did not attend any meetings, it was assumed they were doing something interesting on their own. A certain percentage of students naturally found their new freedom a burden and wished for the passivity of

Learning experience:
Undergraduate liberal arts program in geology and geography and undergraduate major program in geology. Enrollment: 1200 annually for credit, including multiple enrollments for 90 geology majors at junior and senior levels, each enrolled in one or more courses, independent projects, and group projects.

Other descriptions:
"Model for a Humanistically Oriented Undergraduate Geology Department: A Learning Community," *Journal of Geological Education*, March 1972.
"Student-Centered Introductory Geology," in *Introductory Geology: Aspects and Options*. Washington, D.C.: American Geological Institute, 1972.
"Integrated Learning of Science in a 'Third-Force' Community," *Journal of College Science Teaching*, May 1974.
"Radical Innovation in a Conventional Framework: Problems and Prospects," *Journal of Higher Education*, forthcoming, 1977.
Visitors to the department are welcome and inquiries encouraged.

Similar programs:
California State University, Fullerton; University of South Carolina; Minot State College; Colgate University.

Contact:
Bill Romey, Department of Geology and Geography, St. Lawrence University, Canton, New York 13617, (315) 379-5851.

the old way. Some of them registered and then went away and did nothing; others went away and came back with first-class work. But most students stayed in contact with the program.

Departmental enrollments went up, and the number of majors increased dramatically. About the same number of majors as before continued to do graduate work in geology; the others were attracted by the new educational style, the sense of community, and the intrinsic interest of the subject. The new program proved serious and exhilarating. Properly conducted, it required more effort than the traditional course work—it was also more interesting.

It did not take long for external problems to develop. At the end of the first term (fall 1971) many students, especially in the introductory groups, had not completed work they were willing to display in their portfolios. St. Lawrence is still the type of school where an incomplete is given only in the case of illness or a death in the family, and the geology department wanted to give incomplete grades to a whole list of students whose work had not yet come to fruition. After considerable pulling and tugging, an agreement was worked out so that those students could be given the grade of X, which meant "work continuing." Of the students who did complete their work to their own satisfaction, a large number—43 percent—chose to assign themselves the grade of A. This, too, caused worry in the dean's office and some concern among faculty in other departments.

Romey made a simple proposal to the dean: Geology students completing their work would be given the simple designation "credit" on their transcript, while those who didn't would be carried indefinitely with an X. The dean refused, and for a couple of years other expedients—such as labeling geology grades as "self-assigned" on the transcript—were used to protect the standard grading system. Finally, credit-X was approved as an experimental grading system. This will have to be reviewed soon, and may be eliminated. Romey is very philosophical about this possibility. He refuses to be a policeman catching shirkers and, instead, concentrates on teaching those who want his services. In spite of the conflicts, the administration seems to respect the frankness and energy of what the department is doing. The budget has grown since 1971, and Romey has been granted tenure.

Internal conflicts were more subtle. The open scheduling caused a certain amount of chaos. It meant long hours and the strain of maintaining personal rather than merely institutional relations with a variety of students. Moreover, if there were no formal courses, how could anyone keep track of teaching loads? Erickson, who likes to work intensively with each student, sometimes felt pressure to take on more people than he could handle. Romey and Elberty, whose styles are more casual, sometimes resented the fact that they were handling a disproportionate number of students. For some faculty, these inconveniences did not seem offset by corresponding benefits, and they began very soon to return to what amounted to conventional courses. However, none were announced as such until spring 1973, when the first conventional course listings made their way back into the schedule.

Grading policies also caused some disagreement inside the department. Although at the outset everyone agreed that grading would be by self-evaluation, subsequent events made it clear that not everyone meant the same thing by that term. Jim Street, for example, had experimented with project work and self-evaluation before Romey was hired and had found it very satisfying. What he now sees in retrospect is that he was pleased largely because the students usually gave themselves the same grades he would have given them. As the experiment proceeded and students got further away from the old grading sys-

Exploring Forgotten Urban Spaces

Discovering cooperative towns, urban homesteaders, bright-light districts, traditional neighborhoods, forgotten open spaces, and suburban failures are all part of David Lanegran's course in urban geography at Macalester College in St. Paul, Minnesota. Lectures, textbook assignments, and films provide a standard framework for the class; but the field work makes it unusual and somewhat exciting, and causes it to rank consistently near the top when graduating seniors are asked to name their favorite class.

For the project, students must travel an assigned route covering several miles of the inner city and suburbs. Their instructions begin: "The fundamental concepts of geography are distance, direction, size, shape, regionality, contiguity, hierarchy, scale, perception of the environment, and spatial interaction. In essence one is practicing geography when he explains the landscape and/or its elements in these terms. This field trip is designed to enable each of you to become a geographer or at least to look at the city in the manner of a geographer."

Students are required to keep a field notebook "in which you record your observations on the landscape, questions it asks you and your tentative answers, maps, and descriptions of significant features (e.g., quality of housing in a particular neighborhood, traffic congestion, environmental pollution, etc.). In addition to your notebooks you will be graded on answers to the specific questions I have incorporated in the itinerary."

Ten pages of instructions and questions follow, detailing the route the students must take, alone or in small groups. (While part of the route is traversable on foot or bicycle, the second part requires a car; car pools are encouraged.) One section of the instructions, for example, reads: "Go four blocks north on St. Albans. Stop at the intersection of St. Albans and Grand. Get out of the car and walk a few blocks east and west along Grand. Stop in a few stores. Go at least as far west as Victoria and as far east as Dale. (1) What kinds of commercial establishments do you see? Why do you suppose they are located here? (2) What kinds of dwelling units do you see? Why? Speculate on the frequency of bus service along this street. (3) Who lives along this street? (4) Can anything be done to the street to make it more attractive?"

Lanegran, an associate professor of geography who set up the field project six years ago, encourages students to take detailed notes while they're walking in an area, as if they

tem, this no longer held true, and he was not happy with all the consequences.

A few faculty, even under self-evaluation, quietly reserved the right to change grades occasionally (more often up than down). But there was a big gap between Street's conception, which maintained the grading system in all its seriousness, and Romey's willingness to let students have an A with no questions asked, so as to clear the air for teaching and learning. Freedom of registration became a thorny problem. If a student got into trouble with a professor who insisted on material evidence of accomplishment, he or she could switch to a professor who took a more liberal view of self-evaluation. Finally, one faculty member insisted he must have the right to control his students, which meant the right to fail them.

It is important to stress that in all this conflict there seems to have been surprisingly little personal animosity. Faculty members get along well with each other and speak with respect of the talents of those they disagree with. Another chairman might well have jettisoned untenured people who disagreed with him, but Romey takes academic freedom seriously. As a result, the department seems to be reaching an equilibrium after the rapid changes of the last five years. In general, it seems that those who favor relatively conventional grades and courses think of the department primarily as preprofessional and are concerned about whether students who have too many credit-X grades will be admitted to graduate school, or whether students will miss some part of the standard subject matter and be at a disadvantage. (So far, their worries seem unfounded; only one grad school has shown any reluctance about St. Lawrence students.) Those favoring the learner-centered approach are also involved with preprofessional students, but they speak more often about the problems of the introductory courses and of how geology can be interesting and useful to the liberal arts student.

By a narrow measure, the experiment could be said to have failed, since some faculty have returned to older ways of teaching. But to talk of this return as a simple reversion would be a mistake. The atmosphere has been wholly transformed and this has affected even the conservative teachers more profoundly than they themselves may realize. Moreover, if the objective was to set up an environment offering the maximum range of choices for the learner, the experiment has been a great success. Elberty and Romey offer some courses, but continue to do most of their teaching under project registration with credit-X grades. Other teachers offer more course work but still do considerable directed study and project work with various grading methods. The staff-taught introduction has been divided into nine minicourses; a student must complete three to receive credit for the course. Minicourses vary enormously in subject and format, giving students a range of choice. The diversity of teaching styles and assumptions is obvious to everyone in the department, so that there is a heightened consciousness about education among the students.

The willingness of faculty to disagree openly about important matters offers the students what may be the most important lesson of a liberal arts education: Knowledge itself is not a univocal substance that can be picked up and carried off like a rock; it is complex, controversial, and dependent on assumptions and frames of reference. Romey in particular was aware that one change leads to another, precipitating a continuous process rather than a neat transition from one fixed state to another. The last five years have brought many surprises, and the resulting department may not be perfectly satisfactory to any one member of the faculty. But its tolerance, mellowness, and sense of community seem to be satisfactory to the students—and that is what counts. ■

were, for example, biologists. "When it comes to cities," he comments, "people seem to have forgotten how to look—the way they would in a forest or an art gallery, for instance. Cities *are* interesting."

The students evidently concur. Lanegran says he is constantly surprised, even amazed, at the notebooks they turn in, which average 100 pages. "The students obviously enjoy exploring," he says. "New information excites them and they can see themselves learning. I wouldn't be able to bear reading the field notes if they weren't filled with the joy of discovery and fresh insights. It's a stimulating course—and it keeps me fresh."

Lanegran believes this type of outside-the-classroom project is important for any would-be social scientist. Seeing things directly "makes you test theories," he says, "makes you more realistic about what you read in the textbooks, a more sensitive critic." He also feels the field-work idea is readily transferable to other colleges, although it probably wouldn't work as well in a small town. It has the great advantage of "enabling one to do field work with no field budget," he points out. While the course is a beginning one at the sophomore level and Lanegran has no illusions about most of his students becoming geographers, he sees many side benefits for them no matter what their fields. They become a tightly knit group, "different from any other class I teach," he says, citing one class that kept in touch and reunited two years later.

The exploring techniques students learn are applicable anywhere—which not only "makes life much more interesting" but frees people to rely on their own senses and experiences rather than on others' judgments about a place. Personal growth is evident as students are forced to open up, push themselves forward, interact directly with their environment and the people they encounter. Students who have spent hours walking along ghetto streets have a powerful feeling for the daily lives of the people living in that environment.

One young woman busily writing in her notebook in a residential area spotted an old man watching from a porch. He nodded to her, commenting, "Geographer, huh?" Lanegran enjoys the interactions of his students with people "in the real world" and feels both groups are enriched by the experience.

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NEW DIRECTIONS IN AN ANCIENT DISCIPLINE

by Edwin Kiester, Jr.
and Sally Valente Kiester

Alisa Adcock earned her geography degree at San Diego State University by accompanying fishermen on a tuna boat. Graduate student Bill Hoffman surveyed proposed beach access routes for the California Coastal Commission. Three other students drew maps for the San Diego County cartographic services, while Douglas Key charted fire patterns for the state forestry service.

All are involved in a pioneering approach to the age-old study of man-land relationships—Harvey Heiges's internship program in applied geography for San Diego State seniors and graduate students. Whereas geography is generally regarded as a classroom subject, studied by poring over maps and—in the words of San Diego State department chairman Warren Johnson—"memorizing all those figures about cotton production in Mississippi," Geographic Internship 495 stresses action: Interns spend 12 unpaid hours a week working at San Diego area agencies in the planning and environmental fields. Instead of studying facts about faraway places, they apply geographic principles to questions of space use near at hand.

"We try to put students in real situations," says associate professor Heiges, a quiet-spoken man in his late thirties. "We want them to see how academic theories, concepts, tools and techniques can be applied. And it has a career orientation: They gain on-the-job experience, work with professionals, earn recommendations for future employment, and learn about job opportunities. We're proud that 75 percent of our interns are hired either directly or indirectly as a result of their internships."

Since the program was introduced in 1970, about half of the undergraduates majoring in geography and 80 percent of the graduate students have participated. Between 20 and 25 students enroll each semester, with the heaviest load in spring, just prior to commencement. Most interns serve about 20 large- and small-city agencies—generally those dealing with planning, transportation, mapping, and environmental matters—but a small number go into private businesses, such as travel agencies. One girl interned by spending three weeks on an oceanographic expedition. Another youth worked with an airline, helping to map routes.

Twenty-three-year-old Bill Hoffman is typical: He did undergraduate work in physical geography at UCLA, then came to San Diego State for graduate study "because UCLA seemed too theory oriented." Interested in coastal zone management, he signed on for an internship with the California Coastal Commission, the network of regional bodies set up by the legislature to draft a master plan for use of the coastline. Bill was assigned to analyze a county proposal for beach access at 12 sites north of San Diego, exploring questions of erosion, projected amount of use, impact on nearby properties, and proximity to other access routes. After a semester's research, he recommended approval of 10 of the 12 sites. The report won him an offer of a full-time job at the commission plus an opportunity with another agency, but he chose to complete his thesis first.

Heiges launched the program shortly after his arrival from the University of Washington as a freshly minted PhD in transportation geography. Until then, San Diego State, like most colleges of the California State University system, had traditionally been a training ground for elementary, secondary school, and junior college teachers, and the primary function of the geography department was to provide enough social studies courses to qualify them for a teaching credential. It was already clear, however, that teaching was in decline, whereas applied aspects of geography—land use, conservation of resources, mass transit planning—were on the ascent. Heiges suggested converting an existing special studies program into a full-scale internship as a means of increasing the applied geography curriculum. The move won the support of the department and the administration.

The mechanics of the program have changed little since its inception. It is deliberately kept freewheeling and tailored to the individual. Those among the 60 graduate students and 200 upper division majors wishing to participate convey their interest to Heiges the preceding semester, usually on recommendation of their course advisor. They must show at least a 3.0 average. No specific number or distribution of credits is required, though virtually all undergraduate participants are second-semester seniors; when the student applies, he and Heiges review his record to be sure his academic background is equal to the job applied for. Assignments are made on a first come, first served basis. Interns earn three credits and may repeat the internship once, but only three credits count toward the major.

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At first Heiges, who has a wide circle of acquaintances in community agencies, attempted to obtain job descriptions from the "internship supervisors" (employers) and fit the student to the slot. He soon found, however, that the agencies were frequently unable to describe their needs in advance and that it was often difficult to match applicants with vacancies. Now Heiges reverses the process: Students state their preferences, then he sits down at the beginning of the semester and phones potential supervisors until all applicants are placed. (Since most of the supervisors have previously participated in the program, this is seldom difficult; and those who are not called often volunteer.) Student and supervisor hold a face-to-face meeting, like a job interview, to agree on work schedules and other details. In the rare instances where a proposed internship doesn't "take," Heiges tries to arrange another. In 7 years only 1 student has "failed," and only 1 in 25 is unable to complete the internship, usually because he takes a full-time job.

By design, the jobs are unpaid. "The objective is to provide a learning experience," Heiges says, "not a source of income. If the student is not receiving money, we can better control what he is doing. Interns are not cheap labor. We always ask supervisors to hold menial tasks to a minimum. We know that a certain amount of menial work is necessary, but we hope for a situation in which the student can observe and participate, rather than go out for coffee."

Students meet every three weeks with Heiges and their fellow interns to file reports on progress and job problems; they also must submit three papers during the semester, including a résumé. After some indecision about whether the internship should be a pass/fail course, students now receive letter grades. At semester's end job supervisors are asked to complete an evaluation form, rating their temporary employees from 1 (outstanding) to 8 (improvement needed) on such qualities as attendance, punctuality, ability to follow directions, judgment, oral and written expression, interest in job, and professional attitude. Heiges bases the final grade on a combination of the evaluation and classwork. The completed evaluation form becomes part of the student's record.

Kenneth Pyle, an ex-Marine who supervises cartographic services for San Diego County, has employed interns through five years of the program. "I've had some really super groups," he says. "The one last spring, for instance. Of course I've had some interns I wouldn't recommend, though most of those simply found they weren't interested in what we were doing once they were in here. But that's what it's all about. They're supposed to learn about the world of work, not be trained for a specific career. Put me down as enthusiastic about the program."

John Whittington of the San Diego Transit Corporation, himself a former intern, has supervised students for the past three years—but this spring, no candidates applied for transportation internships. "I was really disappointed," Whittington says. "I miss them. They're willing and conscientious and Harvey always screens them well—so you get people who want to learn, not just earn credits." On one recent evaluation Whittington wrote, "It's hard to continue commenting on how good the interns are that you send us...but they are."

Although he arms the supervisors with a five-page set of guidelines and keeps in telephone contact during the semester, Heiges "pretty much lets the guys run their own show." Pyle, for instance, has organized a systematic program of education that introduces interns to all aspects of professional cartography. He starts with 12 hours in "source control"—collection of mapping data—then moves on to 24 hours in compilation, 72 hours in production ("in which they get wet and dirty"), 24 hours in compilation and production editing, and 24 hours in reproduction. "We try to give them a broad background in everything we do," Pyle says. In earlier days, he even gave interns three written exams during the semester but has since given that up.

The Cartographic Services of the San Diego County Department of Transportation is but one "employer" for the geography interns.

Other supervisors follow a looser format. Whittington of the Transit Corporation, for instance, first assigns interns to read the transit action and comprehensive county plan, followed by a series of short-term research projects, usually lasting two to three weeks. Kathy Lehtola, environmental management specialist in the county transportation department, first urges interns to attend meetings of policy-making bodies like the Board of Supervisors or the Comprehensive Planning Organization "so that they understand the structure of county and local government and how the environmental process works." Afterwards, her interns are assigned to assist and observe other employees. "Part of time they just play tagalong," she acknowledges.

According to Johnson, the internship has spearheaded a metamorphosis in the entire geography department. "There is some concern that we're almost vacating mainstream geography," he says. In the California system, state universities are not authorized to grant doctorates except in rare instances, but the San Diego State master's in geography has a decided "applied study" flavor. The department also offers a graduate emphasis in environmental conservation and has on tap an emphasis in transportation planning. Indeed, the changing curriculum reflects the growth of the urban planning and transportation fields: In 1969 the department had only one course in each of these areas; today it has six apiece.

The changes have not sat well with everyone in the 20-member department, Johnson says. "Some of our faculty feel a bit ill at ease with this kind of orientation. They are in favor of the applied courses but they don't want to get too far away from the traditional approach to geography." The emphasis on applied geography has also bruised the toes of other departments at San Diego State. The engineering school, for example, has been displeased with geography's new stress on transportation. Public administration faculty have resisted what they see as geography's encroachment on urban planning. To both protests the geographers reply that theirs represents a different angle. "Geography is a study of spatial relationships and man's use of them," Heiges says. "Transportation determines locations and land use and urban planning reflects social values and land use decisions."

Indeed, Heiges would like to see the applied geography curriculum expanded and interdisciplinary study introduced so that geography students might learn, for example, more about transportation, engineering, and economics. He also wishes the internship could move more into private firms, especially consulting agencies where students could get in-depth training in particular projects. "Unfortunately, most consulting firms haven't the staff or the time to invest in training students," Heiges says.

Another of Heiges's wishes is for a formal evaluation of the internship. The results of the student experience have never been measured and compared with the experience of those who do not enroll in the program. However, Internship 495 was singled out for special mention in an evaluation of the department conducted by geographers John R. Borchert of the University of Minnesota and James J. Parsons of the University of California, Berkeley, and Douglas Strong, professor of history at San Diego State. "[The department] has gained national prominence...through its highly successful internship program, which has led to an uncommon success in placing its graduates in urban and regional planning agencies," the report stated.

And the students seem to have voted "aye." "Students in other departments are envious of us," says graduate student Doug Key. "I've heard several say, 'Gee, I wish our department had something like that.'" (In fact, several other departments have begun internships since the geography program was launched.) Another student says, "It's the ideal transition from school to the outside world. You have time to prove yourself and to hook on to a permanent association before you've left school."

One new phenomenon is the two-time intern. After a taste of the outside world, some students get a closer focus on their career goals, then return for graduate study and a second internship at the graduate level. Jim Hare, for instance, interned in the city manager's office of a small municipality as an undergraduate. He then returned for further classes in transportation and is now spending his second internship planning the transportation system at nearby University of California at San Diego, a project he believes will lead to his thesis.

"They come back from the first internship more mature in many ways, more motivated, and more inspired in their academic work," Heiges says. "They have more experience to draw from. The second internship is then more in the direction of what they eventually want to do. We also find that their academic work improves throughout the internship as they begin to see the relationship between what they learn in the classroom and what goes on outside."

And an unexpected dividend has been one of image enhancement. "We interns are a good advertisement for the University and for the department," Jim Hare says. "One of my supervisors had never hired a geographer before. He was used to hiring people from public administration for his agency. Now the place is open to geography students. He'll probably look for geographers first in the future."

Learning experience:
Geography Internship Program. Prerequisites: Undergraduates must have completed a substantial portion of their major, including the techniques courses and systematic courses necessary as background for the particular internship. Graduate students must have undergraduate geography major or sufficient graduate course work. Enrollment: Undergraduate class varies from 10 to 18; graduate class from 5 to 12.

Other descriptions:
"A Student Internship Program in Geography," *The Journal of Geography*, Vol. 71, November 1972, pp. 458-467.
"Academics and Practical Geographic Training," *Geographical Survey*, Vol. 5, July 1976, pp. 3-6.
"Progress and Development of a Student Internship Program in Geography," *The Journal of Geography*, May/June 1977.
"Academics and Practical Geographic Education," a paper prepared for the Annual Convention of the National Council for Geographic Education, San Francisco, November 27, 1976. This comprehensive paper, which includes program evaluation and class materials, is available on request from Harvey Heiges.

Similar programs:
Several colleges have initiated geographic internship programs recently. A complete list is being compiled by the Association of American Geographers.

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The originator of the program will take a leave from the directorship in fall 1977 to do more classroom teaching. Associate professor Imre Quastler will take over but plans no changes in the program's operation; as departmental advisor, he already has been urging students to participate in internships. Heiges and Quastler agree that the internship will continue as the cornerstone of the San Diego State geography curriculum. And they see it expanding to other campuses as well. "As students increasingly perceive the practicality of geography as a professional field, more will be encouraged to study it. As more students begin careers employing a geographical perspective, an awareness will be gained of the scope of geography, with greater respect for geography as a profession," Heiges says. ■

Molding Minds With Media

"Freshman courses need special handling," says Paul English. "Too many freshmen wind up asking themselves what they're doing. One girl here had courses with three teaching assistants, a TV set—and me. I'm concerned. I want to reach these students and stimulate them."

English uses audiovisual aids in his twice-weekly course World Regional Geography for freshmen at the University of Texas at Austin. He lectures in a 250-seat auditorium, from a center-stage podium equipped with slide projector, light, and audiotape-deck controls. A screen at the far left puts the hour's theme notes in focus so that students won't become lost in detail. Two screens at the far right may show the Tigris-Euphrates river valley photographed from space and a map of the entire Fertile Crescent; English changes the color slides as his lecture proceeds. Taped music, its volume adjustable, points up a cultural aspect of the Middle East or sets a soft background mood for what one student calls "the most interesting class I have and the only one I would never cut."

No roll is taken, but the auditorium is regularly filled with 180 or so students and their friends. The media techniques are only part of the attraction; English uses them to drive home points about the world the 18-year-olds will soon be leading. He seeks to provide knowledge for decision making on population growth, energy, pollution, and equity issues. But the techniques would have far less value, students claim, were it not for the intensely integrated and coherent manner in which the course is organized.

English teaches world geography thematically in three sections. First he discusses the human rise to dominance over the planet through discoveries and developments during two periods of explosive change: the environmental transformation, when people learned about planting, tamed animals, and first moved to cities; and the scientific transformation, when Europe unleashed new knowledge and technology on the world. The resulting reorganizations of land and life, diffused through two major world regions, are punched up audiovisually, setting the stage for a discussion of the problems and potential of those regions.

Next English speaks of the areas of the developing world (China, India, the Middle East, Africa, Latin America) as regional outsiders to the international economy, suppliers of raw materials struggling for modernization; and finally, of the members of the technological world (Europe, Russia, Japan, the United States) as attainers of an unprecedented style and quality of life. The growing hostility of the developing world regions and the questions common to both worlds (with regard to population, resources, and energy) are thus coherently accounted for. The projected maps show where a country lies physically with relation to its friends and adversaries, and the slides show the organization of its society and the events that have befallen it. Integrating these elements is effective in reaching freshmen.

The lectures are supplemented by a weekly two-hour lab, conducted by teaching assistants, for discussion groups of 20 to 30 students. Media aids are not used in them, but the questions raised are sharply related to student experience. One lab, for example, on differential levels of development, focuses on the people of Mozambique (41-year life expectancy, $280 per-capita income, 93 percent illiteracy). The discussion takes off, with some irony, from a popular Bob Dylan ballad extolling the country's "lovely people living free" and "couples dancing cheek to cheek" and then explores, among other issues, the effect of tourism on a people confronting hard social realities. The labs, in general, present for inspection the dynamic processes that have contributed to the geography of the modern world—urbanization, diffusion, energy, and perception.

Media aids in geography are also in extensive use at Michigan State University, where English taught for one academic year during the mid-fifties. On his return to Texas he persuaded the University to buy from MSU copies of many of the materials he now uses. The implementation at Texas of visual and audio supports for well-organized lectures has resulted in a significant rise in the class exam average. It has also produced rave notices from students: "Old topics are presented in a new way that is interesting and gives a new slant on old problems. Dr. English causes us to think for ourselves, but provides guidelines to help us." "The way everything is so beautifully tied together—slides, maps, music, and lectures—makes it very easy to retain the information." "When the bell rings I can't believe an hour has passed. I leave feeling I've learned a lot more than just geography."

As for English: "The principal problem in this course, and I suspect in many others, is to organize a presentation of material that will command the attention and thought of large classes of undergraduates. If I were to summarize the principal reason this course has been regarded as effective, it would revolve around the need I share with my teaching assistants to educate receptive minds. That is fundamental. If we are doing our job, we are molding minds."

For more information: Paul W. English, Professor of Geography and Director, Center for Middle Eastern Studies, The University of Texas, Austin, TX 78712, (512) 471-3881.

The Trilingual Approach to Geography

One of the biggest problems geographers face in the classroom is overcoming student prejudice against mathematics. Many students are horrified to discover that this "soft" science is actually infused with what seem forbiddingly complex equations. To be fair to their subject, geographers cannot excise math from their courses, but they can slip it into the classroom so gently that students are completely disarmed. Peter Gould of Pennsylvania State University has perfected one way of dealing with students who think they are allergic to working with figures.

The "trilingual approach," as Gould refers to it, is a teaching technique he worked out several years ago with his colleague Conrad Strack. It is based on the assumption that all geographers must use three languages to describe their subject matter. The first two consist of words and map symbols—semantic systems most students take in stride. The third is the language of algebra. Gould and Strack reasoned that if they could convince students that many abstract algebraic statements can be translated into word or picture equivalents, the students would be reassured, and perhaps even a little curious, about the mathematical aspects of geography.

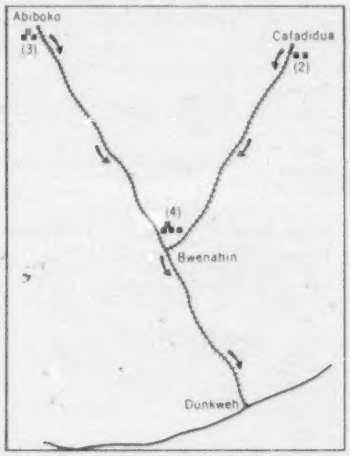
Gould's trilingual approach starts students off with a very simple illustrated example. "Suppose," he says, "we have four towns in Africa connected by a railroad. There is some cocoa at each town waiting to be sent to the port. We can think of the towns as being connected by one-way links and make a table that simply records the presence or absence of a link between every pair of towns. This table can be called a matrix."

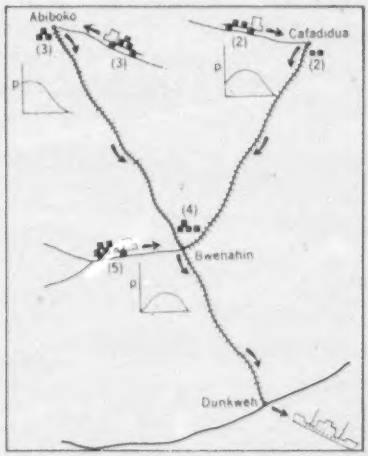
With this simple definition, Gould has led his students into the dreaded quagmire of algebra. He cements their interest by outlining the trilingual concept's basic principle: Geographers need words to give a concept human color and life and maps to supply a visual image. But an abstraction like a matrix reveals that systems that seem very different are actually identical. Of geography's three languages, only the algebraic provides a concept that is manipulable and transcends simple description.

Gould returns to his hypothetical example for demonstration. "Let's say the inland towns have 3, 4, and 2 units of cocoa. These numbers can be written on the map, but there is little we can do with the map except hang it on the wall. The numbers can also be written in a simple list, called the *systems state vector*: [3420]. Will this change as the railroad hauls the cocoa to the port?"

Simple addition reveals the cocoa at each town after shipment—amounts that can be expressed as another state vector: [0504]. But Gould points out that students can use the process of vector multiplication to combine the state vector and the matrix and achieve the same results.

If matrix algebra stymies students, they can always translate any problem back into words or map symbols to clarify it. But often the algebra proves surprisingly easy, because students understand its function better than they would if offered the standard apologia: "One day it will be useful."





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Gradually, the skeleton transportation system of four towns and a railroad is diversified so that it begins to resemble a real system. Students learn to account for incoming truckloads of cocoa by first inscribing on the map the number of shipments that each town receives, then making another vector list of quantities: [3520], and finally proving to themselves that the real state of the system can always be described by simply adding together the operator-modified export vector and the input vector.

Gould's trilingual approach has attracted cautious notice in geographic periodicals such as England's *Journal of Geography in Higher Education*, but he insists that the only valid evaluation of his method is that of the students who nudge their neighbors and whisper jubilantly, "Hey, look at that. It works!"

For more information: Peter Gould, Department of Geography, Pennsylvania State University, University Park, Pennsylvania 16802 (814) 865-2612.

DOUBLE EXPOSURE: MORE TIME FOR STUDENTS

by Evan Jenkins

Benjamin Richason, chairman of the geography department at Carroll College in Waukesha, Wisconsin, is a hearty and self-assured man of demonstrated abilities. One thing he is not is a musician, and he doesn't hesitate to admit that he has a tin ear. But an early foray into the music field suggests much about the man and how he has come to personify geography at Carroll.

It seems that at the time of his junior high school graduation, volunteers were needed to fill out the program. "Well, I wanted to be on that platform on graduation day," Richason recalled in his home one evening this spring. "So I told them, 'Sure, I can do something. I can play the clarinet.' Trouble was, I couldn't really play the clarinet at all."

Predictably, the performance was a disaster, with young Richason hopelessly and cacophonically out of step with his accompanist. The reaction of those assembled must have been one of confusion and even derision, but in the laughter-filled retelling, Richason doesn't dwell on that. It was clearly just a funny thing that happened on the way to life. And if things are worth having, he seems to say, it may be necessary to stick one's neck out to get them.

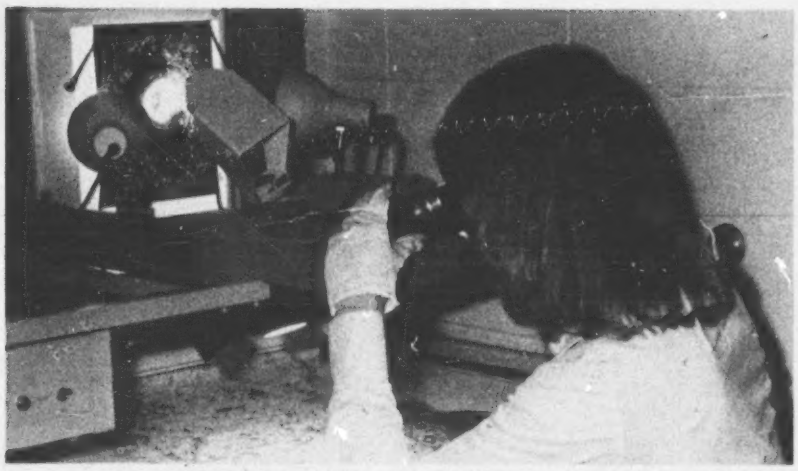
EVAN JENKINS is an assistant news editor of the New York Times. He is the paper's former national education correspondent.

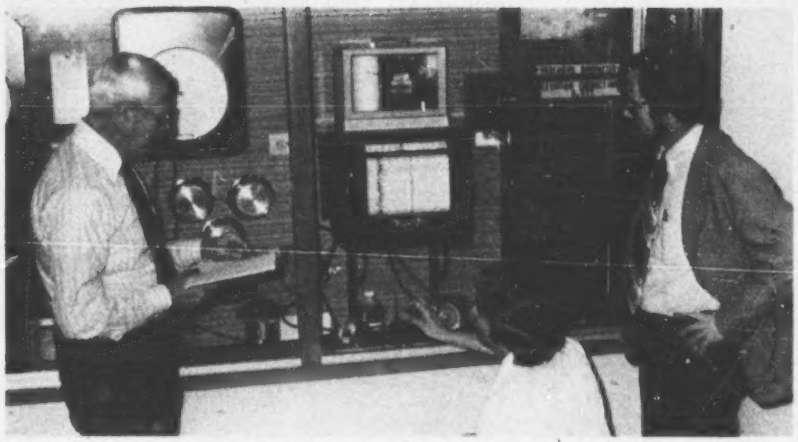
All of which goes a long way toward explaining why Carroll College, a church-affiliated liberal arts school 30 miles west of Milwaukee with a full-time enrollment just over 1,250, has a geography department that is highly regarded by many experts in the field. The department is the creation of "Doc" Richason; he built it from scratch. And while he has had the enthusiastic support of Carroll's administration, it seems likely that a man less sure of his mission would not have had that advantage.

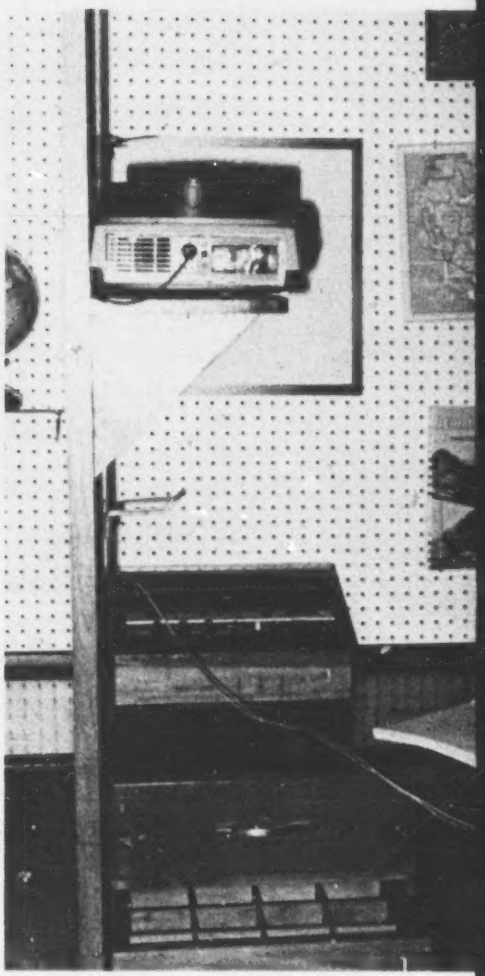
Richason went to Carroll in 1952, having developed and interpreted aerial photographs for the Army and having taught briefly at J. Sterling Morton Junior College in Cicero, Illinois. Trained as a geographer (AB and MA, Indiana University; PhD, University of Nebraska), he was hired as Carroll's one-man department of geology and geography. Now, a quarter of a century after his arrival in Waukesha, his three-man geography department—there is no geology department any more—is perhaps Carroll's proudest boast and principal claim to distinction among the many good, small liberal arts colleges in the Midwest. In promotional literature, Richason and geography get equal billing with the College's (unsubsidized) championship football team. He was the president in 1976 of the National Council of Geographic Education and a recipient of its distinguished service award. "He's such an able teacher," says Morris Spencer, dean of the College and vice president for academic affairs, "he was encouraged to keep dreaming and building. I doubt the department would have developed if he hadn't been here. I can't talk enough about Ben Richason."

Probably the most distinctive aspect of Richason's department is its use of an elaborate audio-visual-tutorial (AVT) method he developed for teaching the introductory courses, which cover physical geography. (A student commencement speaker, elaborating on the theme "Carroll College Is...," included in her recital "the geography department audio-visual-tutorial course".) In addition, authorities in geography education rate the department highly for its breadth and sophistication in a discipline whose areas of interest are almost limitless.

Richason uses the AVT method for Geography 101, Weather and Climate, and 102, Maps and Landforms. Instead of attending standard lectures and separate laboratory sessions, students learn in individual booths where lectures and lab material are combined through tape cassettes and 35mm slides in what Richason calls a multisensory approach. A detailed manual guides them through the tape and slide sessions with only







Above, a student wears gloves to protect a zoom transferscope, which transfers detail from an aerial photo to a map base. Richason and colleagues check the weather monitoring equipment, and, at right, a student listens to a taped lecture in an AVT booth.

undergraduate lab assistants present. Short films and hands-on geographic models are available in the same room. Direct contact with Richason comes only by appointment or in weekly discussion sessions; the latter are required.

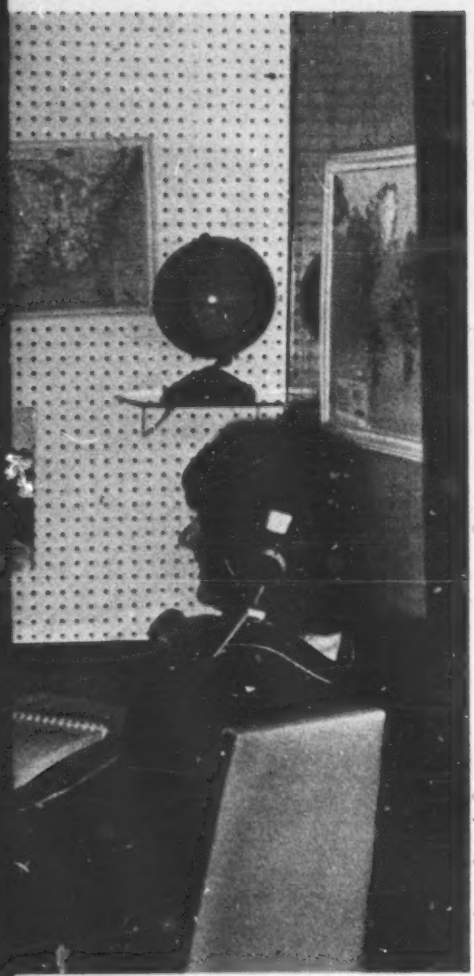
A student is expected to spend about four hours a week in the laboratory, and computerized records show that is about what happens. The lab is open 58 hours a week Monday through Friday and on Saturdays before examinations. Richason points out that expansion of the class is easy with AVT. All that's needed is to increase the hours the lab is open, with no increase in faculty or space.

Those who take the course with the notion—perhaps a relic of fifth-grade geography and its rote memorizing of state capitals, longest rivers, and the like—that geography is an easy way to fill Carroll's lab-science requirement are likely to come a cropper. The intellectual demands of the course are rigorous; and because students use the lab as they wish, self-discipline is a must.

Pam Beernink, a freshman, can attest to that. Having taken and flunked Geography 101 last fall, she was back this spring for 102. She plans to major in education. "I thought geography would be easier than biology, say, and I don't seem to think scientifically," she said during a break from the tapes and slides in one of the 24 booths in the geography lab. "But it's really hard at first to make yourself come to the lab in a regular way. I wanted to prove to myself that I had the motivation to do something on my own time."

Geography 102 also was proving a struggle for Beernink. After setting and adhering to a reasonable pace for the first two week-long units of the course, she had let things slide for the next four. Those students who were on schedule were working on exercise seven. Beernink, who had persuaded Richason to let her stay with the course despite the slippage, was trying to catch up with exercises three and four. He had set aside one booth with materials from past lessons. (A few years go, a student fell behind because of an emergency appendectomy. She kept up with the class from her hospital room, where Richason had a learning carrel installed.)

Beernink and other students interviewed at random said they liked the flexibility of the course, even though it required them to be their own taskmasters. They stressed that Richason was available to explain anything the audiovisual materials left unclear. "He's good that way," said David Zehms, a sophomore. "If you go for the regular discus-



Photographs by Ginny Gnadt

sion sessions or see him during office hours, he doesn't just give you yes-or-no answers. He relates everything because he wants you to understand."

Richason rejects any suggestion that the AVT method results in depersonalized instruction. "I think it's just the opposite," he says. "I don't see anything personal about lecturing to 200 people. With this system, I know the students better than ever and I can teach a great many more of them. While we're sitting here [in his office in Carroll's Maxon Hall], I'm teaching upstairs in the lab. My time is freed for individual work with the students. I know them better than I ever could if I had to run a number of labs and lectures."

Student evaluations conducted during the first few years of the course showed very high rates of approval of the quality and method of instruction. The evaluations were discontinued, Richason says, "because they weren't changing, and there didn't seem any point in keeping them up." There were very few complaints about the instructor's being present only during discussion periods and office appointments. In the lab, though, Richason is always present—in a sense. He is the author of the manuals (149 pages for Geography 101, and 182 pages for 102), and his is the voice on the tapes students may listen to over and over until they have mastered the material. He has selected the slides (many of them photographs he has taken) that his recorded voice guides the students through. And he designed and helped build the booths where the learning takes place. (The start-up cost for the course 11 years ago was $5,000, and the college happily put up the money.)

Learning experience:
Audio-Visual-Tutorial method in Introductory Physical Geography, a two-semester course. The AVT method is also used for supplementary work in Geography of Soils, Map and Aerial Photograph Interpretation, and in Remote Sensing of the Environment, all of which are upper division courses. Enrollment: 23 geography majors, 12 land-use planning majors.

Other descriptions:
"The Audio-Visual-Tutorial Method," *Journal of Geography*, Vol. 47, No. 4, 1967, pp. 155-157.
"The Audio-Visual-Tutorial Method in Geography" (with A.J. Wilner) in *Methods of Geographic Instruction*, edited by John W. Morris. Waltham, Mass.: Blaisdell, 1968, pp. 112-127.
"Teaching Geography by the Audio-Visual-Tutorial Method," *Audiovisual Instruction*, Vol. 15, No. 2, 1970, pp. 41-44.
"The Audio-Visual-Tutorial Method in Geography Instruction" in *Developmental Efforts in Individualized Learning*, edited by R.A. Weisgerber. Itasca, Ill.: Peacock Publishers, 1971, pp. 326-331.

Similar programs:
The AVT method of learning in geography has been adopted by many geography departments in colleges and universities in the United States and in some foreign countries. Some colleges and universities use the method in soil science evaluation and in remote sensing.

Contact:
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Geography 102 consists of 11 AVT independent-study exercises on topics ranging from Map Projections through The Geography of Tectonic Processes: Volcanism, Folding, and Faulting to The Geography of Soils. For each exercise, the manual provides a detailed outline of the material to be covered, with cross-references to slides and other source material, followed by a laboratory exercise, alphabetical listings of new terms and pertinent place names, and a self-test.

In the study carrels one week this spring, most of the students were working on exercise seven—Gradational Work of Weathering, Mass-Wasting, and Streams. With manuals at their sides and headsets in place, they heard a disembodied Richason intone, "As you have learned, bedrock underlies all parts of the land surface.... The material overlying the bedrock ranges in thickness from a few inches to hundreds of feet and consists of soil, clay, sand, gravel, and other loose material.... Will you now please turn on the slide projector and turn to slide one...." As the lesson progressed (the tapes typically run about 80 minutes and are not meant for ingestion in one gulp), Richason explained the various ways in which rock is broken down physically and chemically, what is produced by the processes, and—occasionally—why all of this is important to ordinary mortals: "Aside from its fundamental position among the gradational processes, weathering is vital to humans because it results in soils, which are the basis of our life."

Along the way, Richason's voice kept the students changing slides that showed such phenomena as felsenmeer, one of the unit's new terms. The word means "sea of rock," and the slide showed a jumble of boulders that looked like some ancient, fallen temple. In fact, the pile had accumulated—the recording said—some 14,000 feet up Mount Evans in Colorado through centuries of sharp temperature changes and the freezing of water in cracks. About 20 minutes into the description of how rocks break down, Richason on tape asked the students to go to a small curtained booth in the lab and watch a two-minute film (made by the Walt Disney people) showing one effect of the breakdown—a landslide. Later in the lesson, they

would examine and handle a landform model—a kind of three-dimensional map—illustrating the geographical features described in the carrels.

Geography teaching relies heavily on field work, and Carroll's department provides it. There are standard field trips, aerial photography flights (the department offers advanced instruction in aerial photo interpretation and in remote sensing of the environment), internships with planning agencies, and an annual winter trip to a field camp in Jamaica that now includes participants from other departments in addition to geography. And, as Richason and his colleagues see it, AVT instruction includes field work—the field is brought into the lab.

> *Those who take the course with the notion that geography is an easy way to fill Carroll's lab-science requirement are likely to come a cropper.*

Some outsiders familiar with the Carroll program have two principal reservations about it, both stemming from its reliance on canned material. One is that it may become too rigidly sequential in dealing with information that ought to be thoroughly integrated. (Richason thinks he has made relationships between segments of the course clear.) A parallel concern is that instruction committed to tapes and slides can fail to keep pace with developments in a rapidly evolving discipline. (Richason acknowledges that problem.)

"Since 1966, when we introduced AVT here, the whole concept of plate tectonics has developed," he says, referring to the concept of the earth's crust as a collection of great plates in constant movement. "We had to accommodate that and stop talking about things floating around like corks. It was difficult. What we've done is to institute a major review of all the material in the courses every three or four years. On specific questions, we review all the time. Often the solution is not to change the audio-visual materials, but simply to insert or add material in the manual."

Charles F. Calkins, a former student of Richason's and now one of the department's assistant professors, shares the reservation about timeliness—"It's good to bring in things you're currently working on, which is more difficult with AVT"—but feels that for the introductory course, the advantages heavily outweigh the disadvantages. (Richason says that compelling topical material can be, and is, covered readily in the weekly discussion meetings.) "As I look back, I think I would definitely prefer the present system," says Calkins, who took the course before AVT. "You're getting the material in a coherent package and not disjointed, as it tends to be when you read a text, attend a lecture, and then cover the same stuff three days later in a lab session."

Calkins's specialty is cultural geography. The department's other assistant professor, Michael L. Thaller, concentrates on economic geography. Richason calls himself a physical geographer but emphasizes that all three men are generalists. Between them, they offer courses that cover much of the broad range of interests geographers have in mind when they call their discipline a synthesizer and a bridge between the natural and social sciences. The courses offered in the department, which number more than two dozen, tackle such subjects as climatology, geography of soils, and cartography; settlement geography, political geography, and historical geography; map and aerial photograph interpretation; and transportation geography, urban geography, and conservation of natural resources.

That "weathering is vital to humans" because it produces soils seems beyond argument. That the phrase pops up in a rather technical tape-recorded discussion of gradational processes is hardly accidental, for Richason and other geographers stress that their study focuses on the "man-land relationship," with more and more emphasis in recent years on the human component. Geography,

Encouraging a View of One's Own

As a beginning instructor at Illinois State University in the fall of 1974, Alan DeLucia, now assistant professor of cartography and geography at the University of Idaho, wanted to structure a teaching plan that would help lower level undergraduates learn world geography by becoming actively involved in the collection and analysis of material. "When I was in college," DeLucia explains, "I always felt more satisfaction and absorbed a greater amount when I had to put the picture together on my own, as opposed to reading texts or making notes while a professor provided information and conclusions in a lecture." Accordingly, DeLucia designed a study guide to create an active learning experience wherein students gather data on a given dilemma of geographical significance; single out key facts and sets of features to be related; and, finally, present their own positions regarding the situation and its possible solutions.

At class meetings three times a week, DeLucia lectures on population distribution, economic development, climate, agriculture and land use, race, origins of language and religion, the state/nation concept, and man in cultural activities. The study guide is distributed about a third of the way through the semester and must be completed in two to three weeks.

The study guide on the world food crisis, for example, is divided into three parts. The student learns in the introduction that at the first world food conference in Rome "over 2,000 delegates met to discuss how to increase the world's food supply more rapidly and to set up an emergency system for dealing with famine when it occurs." He or she is told that "if the solution can be found in a more effective, more efficient use or organization of earth space, then geographers possess the tools and techniques to aid significantly in finding it." The guide then shows the student how to gather and analyze data to make a decision about the best method for alleviating world hunger.

In part one of the guide the student charts the amounts of food available in seven countries if each depends

say the geographers, has long ago outgrown its stereotype: nothing more than the dry study of maps and rocks and rivers. It has become, they insist, an exciting examination of man in his environment, of the ways each affects the other, of what's possible and what isn't in the space mankind occupies on earth. Says Richason: "People get into geography and find it more difficult than they expected, but they also like it very much because it's relevant—you understand what's going on around you."

The view of geography as a discipline with major practical contributions led to the introduction at Carroll of a major in land-use planning, a rarity at small undergraduate colleges. The major, available only in the last two years, is essentially "old wine in a new wine skin," Richason says. "Twenty years ago, we were beating the bushes for jobs for our geography majors. We found that one of the areas that was quite open was planning—urban and regional planning agencies, park commissions, and so on. About 40 percent of our graduates have ended up in planning jobs, either directly or after graduate school. A major seemed natural.

We took a look at what we were offering, and our graduates told us what was needed in the field. There's a seminar in land-use planning that majors have to take, and they must work one semester in the field with a planning agency; but basically what we've done is to repackage materials we were teaching all along."

Dean Spencer calls the land-use planning major a "logical offshoot" of Carroll's geography program, particularly since heightened interest in urban and environmental questions has increased the market for planners. Robert Cramer, president of the College, takes much the same view. "It was a natural extension of work already going on, and it would have been a shame not to offer it. We're in a time of great career orientation among students, and there was some concern when we introduced the major —it was even worse when we started a major in accounting—that we were getting too vocational. We do want to preserve our emphasis on the lifetime value of a broad liberal education, where the important thing is learning how to learn. But I think we've done that; we've shown that it's possible to have a land-use planner—or an accountant—who is liberally educated in a genuine sense."

Cramer also shares Spencer's high regard for Richason's AVT program and for his stewardship of the geography department. "He's been a real asset to the College," says Cramer, "One of Carroll's problems is that we don't have a very broad reputation, even though I think we're a fine institution. When you're able to keep an individual like Ben Richason—I'm sure he could have moved many times—it makes it easier to attract other quality faculty members. The emphasis here is on teaching, and promotion and tenure aren't usually based on research and writing. That's as it should be, but it can discourage innovation. Ben has shown that in such a setting you can definitely make significant contributions to your discipline." ■

solely on its own resources with no imports or exports. Part two requires the student to make maps and graphs of population, growth rate, and arable land to arrive at his or her own view of where the world's hunger belt lies. "I include a lot of mapping," DeLucia notes, "because making maps rather than simply studying them develops mental images. Students who build a set of mental maps acquire a more acute perception of world situations, and that is the purpose of world geography."

The student is then asked to grade each country in terms of its relative ability to feed its people, using the information he has collected plus any other factors he thinks pertinent, such as climate or caloric consumption. Brief reasons for grade assignments are called for.

In part three, the student discusses his opinion of the connection between oil prices and food production capability, the relationship of beef consumption to grain supplies, and what he concludes is the most important difficulty mankind must deal with in order to control hunger.

Only in the objective exercises are students' answers patently right or wrong; where discussion is called for, DeLucia will accept any substantiated conclusion, whether or not he agrees with it.

How do students react to learning world geography with the study guide? "Some are just looking for an easy way to get through, and they frequently don't do well," DeLucia reports. "But most tell me they enjoy the experience of getting their hands on the information and reaching conclusions on their own." He adds that students are often pleasantly surprised to realize they've come away with a clear picture of how factors such as population, arable land, and birthrate combine to cause a hunger crisis.

Faculty who read DeLucia's study guides are intrigued, though his method has not been tried elsewhere, probably because of the time required to prepare and conduct such a program. DeLucia points out that "a tremendous amount of work" was necessary to produce both the food crisis study guide and another on energy, and grading them is also a big job. In addition, the number of world geographical topics that may be followed step by step to a logical conclusion is somewhat limited.

DeLucia's newest project is Cart-O-Graphics, the University of Idaho's cartography lab, established in January 1976 as an educational/commercial venture. Here a student staff provides map making and other graphics services for state agencies, professional authors, and students preparing dissertations. Income from the work is funneled back into the lab, and the geography department makes up any difference between receipts and operating costs. DeLucia hopes that eventually the lab will be economically self-sufficient and that its services, now dispensed statewide, will soon be utilized over the entire region. It is, DeLucia notes with pride, "the best equipped lab in the Northwest."

For more information: Alan DeLucia, Department of Geography, College of Mines, University of Idaho, Moscow, ID 83843, (208) 885-6216.

MUSIC

MUSICIAN OR TEACHER– THE DELICATE BALANCE

by A. Theodore Tellstrom

Students in music teacher training institutions often emphasize the music at the expense of the teacher training. They want to specialize in the subject area of their choice but tend to be apathetic toward the very teacher competencies that could help them relate to their future pupils. Their attitudes and expectancies can often be summed up in the statement, "I shall teach as I was taught."

Part of the trouble is that music competencies take up a very substantial portion of the curriculum. Participation in performing organizations is required and the more skilled and talented the vocalists or instrumentalists, the more the opportunities for specialized involvement. Choral, orchestral, band, and numerous special ensemble experiences are available and high performance levels are expected. With their demanding practice schedules and strenuous rehearsal sessions, these groups use up a goodly portion of time and energy. Such experiences are unquestionably essential but the prominence accorded them has its negative side.

Performance focuses attention on the objective aspects of music, on skills and techniques required for a satisfactory outcome. Participants must conform to a very rigid discipline in order to prove their ability and to reach a high degree of mastery with respect to voice or instrument. Such emphasis draws attention away from subjective aspects of music such as *musical responsiveness*, although this should be a major objective for music educators.

Surrounded by and involved in performance, candidates can lose "the just perspective" about what music education is. In the term *music educator*, *music* is but the adjective that modifies the noun. The major emphasis should be on creating or developing the *educator*. With respect to teaching, both vocalists and instrumentalists need to master the same competencies and procedures. Yet not infrequently, students suggest that curricula be designed to permit music education undergraduates to choose between a vocal and an instrumental track. Even institutions sometimes show a preference for such moves. This split between vocal/general music and instrumental work is an unnatural one and should be healed. In both realms prospective teachers must be prepared to bring to their music competencies an understanding of the principles of learning, a thorough grasp of child growth, and a keen awareness of the developmental process.

Yet what passes for music pedagogy is often something else altogether. For approximately 30 years introductory music education courses have espoused, in the name of philosophy, personal beliefs that are a mishmash of beautiful thoughts, based on conjecture and sweetened by nostalgic memories of "how music was once taught to me!" In fact, educators in music (and in other disciplines as well) teach in so individualistic a fashion that they rarely share any educational purpose or recognize any need for a common cause. Worst of all, the educational principles of leading philosophers, so vital to the construction of educational plans, escape even the barest notice. One major new educational movement that began about 1960 has not yet sifted down into many music teacher training institutions. Revised experimentalism, which emerged at that time, was built on the teachings of pragmatism, but the principles of that epistemology that had proved ineffective earlier in the century were now revised. This new platform has had enormous impact on teaching principles and procedures and fresh

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thought continues to enrich it. Yet the movement remains to be discovered in many quarters.

Along with philosophy, the psychology of learning has contributed tremendously to revised experimentalism, but young teachers continue to enter the classroom with apparently little recognition of its potential. Young teachers often accept it as a definitive educational formula rather than as a technique that functions within the larger educational framework.

In many cases instructors become so method conscious and insensitive to the relevance of major educational principles and processes that they flit from one system to another every year. Dewey was reacting to a similar condition when he spoke of "the unwise zeal of those who, lacking in stability, are blown about by every new wind of doctrine and lose a just perspective."

Psychology cannot yet dictate a method where procedures are to be followed in a specific order, because the mind still evades complete understanding. Still, in contrast to mere speculation or learning theories disproved long ago, psychology can provide principles upon which to build better teaching processes. No method can represent itself as the one perfect system because there are so many different ways of learning. Acceptable teaching procedures must vary with the individual and the situation, and the successful teacher is the one who, to the best possible degree, understands the mental processes of children and adapts techniques to the problems that arise daily. Thus the student pursuing a music teacher training program needs to be knowledgeable not only of the philosophy and psychology of the day, but of the evolution of new principles which necessitate the modification of procedures and techniques. Only then will the curriculum achieve its greatest potential.

In these days of competency-based teacher education there are rumblings that institutions of higher learning may redesign their curricula to give candidates greater practice-teaching experiences in the classroom. This could prove helpful were it not for the fact that most plans call for spreading practice teaching over a four-year period rather than waiting until candidates are substantially prepared. Supporters argue that student teachers should become involved in real teaching situations as soon as possible so they may determine early whether teaching is the career they genuinely wish to pursue. It would seem more advantageous, however, to stress at the start those studies that are particularly germane to the principles and processes of education as a foundation for success in later classroom involvement. Sending out student teachers in their early undergraduate years when they have had minimal preparation to instruct children seems unfair to both the candidates and their charges. One does not select an attorney or a physician from the student body of a professional school. The situation should be no different in the field of education.

A variety of disciplines must of course be included in the training process for a candidate to become an effective and successful music educator. Music competencies are certainly important but they must not dominate the teacher training curriculum. A change of direction is long overdue in order to develop skills, knowledge, understanding, and attitudes that are pertinent to the field of education per se and to enable students to comprehend how the principles of education relate to the teaching of music. In this reorientation, it becomes imperative for music teacher training institutions to join in the common purpose of upgrading their programs, aligning aims and teaching procedures with today's principles of education. □

ANOTHER WAY OF HEARING

by Herbert B. Livesey

The classroom is commonplace: one-armed chairs, green blackboards, fluorescent lighting. The blinds are drawn to shut out the diversions of the warm spring day. Across the front of the room, a desk, tables, and chairs have been butted together in an improvised arc. Atop them are deployed a variety of simple wooden and metal xylophones. Behind them stand 13 students, mallets ready. Seventeen classmates look on.

They are not music majors, and this is only their second time with the instruments. They have arranged themselves, therefore, in whatever attitudes they habitually employ in the face of an experience-about-to-happen. Some affect languorous indifference; others, grinning uncertainty; still others, brow-furrowed determination. They have just banged at the xylophones for a tentative few seconds, getting acquainted with their sounds. Now the students are poised, awaiting further instruction.

"Okay," says the professor, "let's pull this all together. We'll begin with one person, add another, then another, until everyone is playing. Your own patterns, your own rhythms, remember. Don't everybody do the same one, but do choose a rhythm that fits with all the others. It doesn't have to be complicated. Keep it simple."

He looks up and down the row. "And now...ah...you start," he says, pointing to a student in the middle.

She jumps a little, hesitates. "You just want me to...."

"...do a little melody pattern," he coaxes. "Just do a pattern."

She plays four slow notes. Her instrument is low pitched, mellow. "That's it," he says, dropping into a cadence, "now repeat and...keep...it...going...and... now...you." He indicates another student, who plays seven notes quickly, so they occupy the same moment of time as the first player's four.

Then the professor cues a student on a metallophone, its bright, tingly sound contrasting with that of the two wooden xylophones. Soon all 13 students are making music at once, playing individual phrases over and over, blending and growing and swelling. The result is vaguely oriental, primitive, and complex. Then the professor snatches up a recorder and sends a continuous trill rippling through their patterns, transforming the composition into an Andean symphony.

The instructor stops after a few bars, then silences the musicians one by one until only the first student is left, determinedly tapping out her four slow notes. At his gesture she too halts. The professor pauses so the students can listen to the afterimage of what they have accomplished. They smile.

"Very nice," he says. "A simple melody like that, repeated over and over, is an ostinato melody. To build our final piece we simply string several of these little patterns together. To do that, we're going to do some longer melodies first. Earlier, we did some question-and-answer clapping. Now we'll do it with the instruments. The only thing to remember is to make A and D the important things." He raps those notes on a xylophone. "That will bring us into the tonal feeling we need. Now do it together awhile, to build your confidence." They do, and he continues talking above their experimentation. "Go all over the instrument now. Not only that little germ pattern we did before, but all over. Just start and end on a D or an A.

"All right," the professor says, quieting them. "Now here's my question, and everybody answer." He pipes a plaintive tune on his recorder. The students listen. He stops; they respond, but raggedly.

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Photographs by Herbert B. Livesey

Arnold Burkart leads students in the creative process of making music.

"Very good," he says, though it wasn't. "Change it rhythmically this time. Do it differently from the other people, but still fitting within this background pulse." He makes percussive noises with his mouth and snapping fingers. "My question will be a little shorter and slower this time." He considers a moment, then toots a bar. The reply is more cohesive, so he goes on with a different pattern, and the "answer" is still more shapely.

Within five minutes the group has progressed to an extended improvisation of several distinct melody patterns. While the students are not ready for the concert hall, they surely understand some rudiments of musical structure unknown to them when they entered the class half an hour earlier.

This is a class for nonmusic majors at Ball State University in Muncie, Indiana. The students are prospective teachers of other subjects. At other institutions the course might be called Principles of Music or Music Appreciation. The label doesn't matter; the instructor, Arnold E. Burkart, has his own notions of the way in which the course should be taught.

"We've talked about rhythm, about melody, and we've played these instruments," he tells the students, now returned to their seats. "Today I want to talk about form. We've been using many building blocks of form—little motives, little patterns—so that you have a good idea what it's all about. We've put them together in a musical expression. But there are longer ideas; you felt them at the end of our time at the instruments.

"Here's how we formulate pieces of music, using letters of the alphabet for the notes. I'll do a form in dance, and I'll tell you that this is A." He chops his hands past each other and spins on his heels. "Now watch this." He strides three times, like a wooden soldier, then faces about. "What letter?"

"B," they say in unison.

"And this?" He chops his hands again and spins.

"A."

"Right. So that dance I did was an ABA. Now this?"

He performs several distinct sets of movements, different from the first two. "What was it?"

"ABACA."

"Right. Now here's one of the most common forms of music." He draws a circle and a triangle on the green board. "Two contrasting statements—A, B. This is called binary form. And this," he adds another circle, "is ternary form—ABA—coming back to the first statement. Finally, this—a circle, a triangle, a circle, a square, a circle—is a rondo form—ABACA. That's what we were just playing, and what I just danced." There is a murmur of recognition.

Learning experience:
Sensory Awareness and Response to Music. No prerequisites. Enrollment: 25 to 30 per section, usually six sections.

Other descriptions:
Strategies for Fostering Divergent Thinking Abilities in Prospective Teachers by A.E. Burkart, doctoral thesis, Indiana University School of Education, 1973.
Keeping Up With Experimental Music in the Schools, Vol. I, 1974-75, edited by A.E. Burkart, Muncie, In.: Keeping Up With Music Education, 1220 Ridge Road, Muncie, IN 47304.

Contact:
Arnold E. Burkart, Coordinator of Graduate Programs in Music, Ball State University, Muncie, Indiana 47306, (317) 285-7081.

"One more," he says, "theme and variations...."

The class proceeds. Burkart uses nursery rhymes, altering and inventing. He asks the students to draw on paper as many examples of binary and ternary form as they can in two minutes, without using the symbols already demonstrated. They sing and play some more. In 50 minutes the class is over.

> *"The students don't need me to play records for them. What I try to give them is a sensitivity to musical concepts.... We do this through active participation, not through passive absorption of other people's songs.*

Burkart is an amiable man who turns voluble when the subject of teaching comes up. Clearly, his techniques are untraditional. Not for him the dropping of a needle on a record or the ritualistic opening of textbooks to biographies of Bach and Mozart. "The students don't need me to play records for them," he says. "What I try to give them is a sensitivity to musical concepts. We don't worry about notation or traditional symbols. That comes later as the need arises. We start by learning to use music as a communicative device. We do this through active participation, not through passive absorption of other people's songs.

"We focus primarily on developing what educational psychologists call divergent thinking. Some people may think the phrase has a negative connotation, but as we use it, it has to do with the ability to generate varieties of information. That's why I asked the students for different kinds of rhythms and melodies. I want them to learn to come up with alternate responses."

On several occasions during the class, Burkart had nudged his students into changing their patterns. Are college students more inhibited in this regard than, say, primary grade pupils? "Not necessarily," he replies. "In my experience elementary school students are just as conservative, perhaps more so. You ask them to invent a melodic pattern and tell them it was very good. The next time you ask them to do another pattern, they remember you liked the last one so they repeat it. You have to pull this quality of divergent thinking out of them."

Is he suggesting that divergent thinking is synonymous with creativity? "Not at all. Divergent thinking is an important element of the creative process, but we can't say that it insures creativity. There are other factors—inspiration, for one. The ability to evaluate choices, for another. But while we haven't isolated those things in a way that they can be taught, we think that divergent thinking *is* teachable."

Very well. What is it? "It has four prime components," he says, sketching a grid with four vertical lines he labels fluency, flexibility, originality, and elaboration. "And these," he says, indicating the horizontal lines, "are such elements as rhythm, melody, form, simultaneity, timbre, style, and tonal quality. I concentrate on the intersections, the ways in which fluency influences form, or melody influences elaboration.

"To illustrate the distinction between fluency and flexibility: How many uses can you make of a newspaper besides reading it? Start a bonfire with it; line a birdcage, stuff it in shoes to keep their shape; hit the dog. On a fluency or flexibility scale; that would score four. But if you said: line a birdcage; start a fire; line a drawer; line a garbage can—then you've done something quite different. Fluency, yes, but not much flexibility. Three of those four uses are in the same category.

"Originality, on the other hand, is essentially statistical. In a group of a thousand people, would you come up with five ideas about a certain task no one else thought of? If so, that would be originality. The degree of originality depends upon the number of people who propose the same solutions.

"Finally, elaboration. Here, a germ idea already exists. The issue is: What can you do with it? For example, you have this." He da-da-da-dums the opening notes of Beethoven's Fifth. Then you have this." He repeats, but at a lower pitch. Then he reverses the sequence of

Music as a Social Art

Seat 16 beginners at adjacent pianos. Have them transpose "Go Tell Aunt Rhodie" into E flat. If one fumbles for left-hand harmony, point out the chord he's got wrong and allow him some time for peer help. If he's still groping, just ask the entire class to move on to "Old MacDonald," which introduces eighth notes, a challenge that offers a new perspective on the skill he couldn't quite manage before.

This is the technique Robert Pace employs in Piano for Non-Music Majors at Teachers College of Columbia University—a one semester course that uses peer interaction to rapidly develop visual-audio-tactile skills in adults with little or no musical background. Among the students are grade school teachers, college education majors, and nonmatriculating 50-year-olds. They're learning melody, harmony, and rhythm, as well as how to read a page of music, feel for the keys, and hear and react to what they're playing—all at the same time. They're taking risks, sometimes uneasily. But ego setbacks are mild, stagnation is rare. By semester's end they'll be playing and improvising short pieces of pop, rock, and jazz for each other, along with their own compositions.

Pace, a vigorous man imbued with the philosophy of growth motivation, considers group piano an ideal way to foster students' personal enrichment. In acquiring the skills demanded by their instruments at approximately the same rate, his students please both themselves and each other, he feels, and gain an insatiable thirst for further growth. He argues against individual instruction. "Music is a social art," he says. "So why shouldn't lessons be as social and happy as performances?"

Initially, Pace is dealing with musical illiterates, but he quickly reduces their handicap. He conveys rhythm with a hand-clapping, foot-tapping

the notes. "Elaboration is the variations on a single idea. In music you can elaborate with pitch, with color (tonal quality), with direction, with volume."

Burkart is convinced that divergent thinking can be taught. Toward that end he has borrowed techniques not only from the methodologies of other imaginative music educators, but from the other arts as well. Several of his exercises might have come directly from visual arts theory courses. For example, he asks students to connect point A in the top left corner of a piece of paper with point B at the lower right. "Utilize the space to good advantage," he directs, "and use elements of contrast and repetition in the drawing." In a series of boxes, he tells them to create "visual and symbolic analogues to musical forms" along the lines of the trylons and perispheres he used to illustrate binary and ternary form in the earlier class.

"Visualization of these components is important, because music is the most abstract of the arts. However, parallels between music and the other arts can be overdrawn, and pen-and-pencil visualizations remain only a small part of our efforts. We're teaching music, not sculpture or poetry."

Burkart's instructional strategies have evolved over a long teaching career, mostly on the public school and district level in California. He received an MA from Fresno State College in 1958. It was not until he accepted a position at Ball State over a decade later that the exigencies of academic survival and advancement impressed upon him the need for a doctorate. It seemed as good a time as any to put his theories on trial.

In 1972, with the cooperation of his department chairman, Burkart arranged for the introductory music course. There were three sections: two control groups and an experimental class. Burkart taught one control group and the experimental class. As measured by the Torrance Tests of Creative Thinking (Figural Forms), precourse testing produced roughly equal mean scores for all three classes in all four component areas of divergent thinking. Postcourse testing, however, showed dramatic gains for the experimental group: From a mean score of 17.15 to 26.44 in fluency, from 14.37 to 21.11 in flexibility, from 24.85 to 34.07 in originality, and from 59.82 to 116.11 in elaboration. In the first three areas these scores represented gains two to three times greater than corresponding performances in the two control groups. Only in elaboration were there significant improvements in all three classes.

Burkart says there was no resistance on the part of his colleagues to the installation of his methods. Although the introductory course sequence was revised shortly after the conclusion of his research, all instructors remained free to teach assigned classes as they saw fit. Burkart currently holds the elective post of coordinator of graduate programs, and some of his strategies have been adopted by other professors. He describes the 70-member faculty of the School of Music as being unusually receptive to innovation.

Burkart is not disturbed that this has not yet blossomed into large-scale conversion. At a stage in his career when many professors are content to savor tenure and accolades for past accomplishment, he is persuasive when he insists: "This is not an end. We will continue to explore and evolve. Maybe someday we will even find out what inspiration is." ■

exercise, then demonstrates, to the humming of his students, the movement of a melodic line up and down on a page, the "simplest thing it can do." For finger orientation, he makes use of the major innovation in piano teaching today: Students play the raised black keys from the start, using them as braille-like guides to the keyboard. Thus, almost immediately, students are sight-reading tunes in as close to a reasonable rhythm as they can manage. From then on, it's "Try everything, do everything, don't ask questions, and don't worry!" Pace makes only one stipulation in that oral contract: that the lessons prescribed in his primers for adults ("Music for Piano for the Older Beginner" and "Skills and Drills") be done sequentially. Mastery of the lessons isn't required; it will come through later review.

The illustrated instruction books keep verbalization to a minimum. "The More We Get Together," for example, simply consists of finger-numbers below the staff indicating which notes the student should play, with a brief written admonition to watch the fingering of the right hand in the second and fourth measures. Any number of tunes like this might be played in an average class. From a platform piano in front of the group (pianos are electronic and can be switched from headsets to loudspeakers) Pace can listen, advise, or turn a player's performance over to the reaction of his peers. Pace keeps each lesson brief as well as entertaining, but by incorporating pieces of a varied nature—baroque and classical, for instance—he manages to stimulate everyone.

The rewards of group piano instruction are immediately apparent. As audiences students know what they like when they hear it, so they can help each other identify problems that jar. Along with Pace, they suggest solutions, evaluate each other's reactions, and encourage each other's progress. At semester's end, a student is likely to be in touch with a talent he might not have known he had. He'll know his strengths and weaknesses in fundamental skills and be in excellent shape to keep learning on his own.

There's another indication of the group method's success. Pace also offers piano courses at Columbia to music teachers—those without keyboard experience (band and choral directors, for example) as well as piano majors. Since the early 1960s, more than 25,000 teachers have absorbed his views and techniques. Says Pace: "I'm not just teaching music. My business is also teaching human beings how to live and work together."

For more information: Robert Pace, Dept. of Music and Music Education, Teachers College, Columbia University, Box 182, 525 W. 120th St., New York, NY 10027, (212) 678-3284.

Creating a Bridge Between Learning and Teaching

The transition from student to teacher is seldom easy for education students. The difficulty is sometimes compounded when their courses allow them no middle ground between classroom observation and student teaching where they might catch their breath and determine if teaching is really for them.

For almost 10 years, sophomores in music education at Temple University have been offered just such a chance. When they enroll in Music in the Elementary School, they are transformed for a semester into "externs," a cross between students and teachers combining the best of both worlds. Externs are given the responsibility of teaching 10 weekly lessons in an elementary school near the Temple campus—without forfeiting the security of the classroom in which they are still students. They receive a unique educational package: intensive instruction in teaching methods plus the opportunity to try these methods out in a classroom.

Marian Demand and Roger Dean, supervisors of the program, report that most externs, like most student teachers, are more than a little fearful at the prospect of their first teaching experience. They visualize being abandoned to fend for themselves in a class of hostile inner-city children. In fact, they are part of a carefully structured program that can make the leap from music student to music teacher as painless and just about as methodical as climbing stairs.

In the first classes of the semester Demand and Dean ground their students in the philosophy of music education. Most students have never realized that even the simplest music lesson has a broad theoretical basis to which it must always refer. Readings and discussions introduce a basic tenet of aesthetics that will be recalled throughout the semester: the interrelationship between perception of music, reaction to music, and teaching of music. Musical awareness is approached by producing, analyzing, conceptualizing, and evaluating, and music teaching encompasses these processes.

Students then take the logical next step on the road to teaching—the construction of a lesson plan. They discover that it is not enough to expose a class to music and assume that learning will take place: They must define their goals formally and choose materials and procedures that will achieve them.

Externs are encouraged to base their 30- to 40-minute lessons on one simple musical concept, such as a steady beat for young students or asymmetrical rhythm for older ones. They search for materials—a song, a record, or a sound structure to be created by the children—that illustrate this concept. They must also incorporate psychology, devising questions or activities that will indicate whether learning is taking place.

Jules Schick

A Temple music extern observes a child playing a familiar phrase from a song in which the melody moves downward by step.

They discover that teaching requires constant vigilance and a degree of strategic cunning to succeed.

Students' strategies have become more imaginative since instructional music materials were moved into the Presser Learning Center two years ago. In this renovated row house on campus, students have access daily between 8:30 and 4:30 to the latest teaching aids, including recordings, sound and video equipment, Orff and rhythm instruments, and a selection of basic song series. Students sign out materials and equipment from the Center for use in the classroom. The Center's facilities can be used also to construct teaching aids; consequently, students try learning strategies that might otherwise never occur to them.

The college classes also receive weekly group guitar instruction. Students are issued university-owned guitars and instructed in the basics of plucking and chord techniques. Many become sufficiently competent to use the instrument for accompaniment when they teach.

By the fifth week students are ready to encounter the children. They meet first with small groups from a public or parochial elementary school near the campus. After observing the class and conducting several lessons with a few children, externs confront the entire class. By this time they are armed with both theoretical and practical tools.

Frequent observations of the 30 to 35 externs are scheduled by the instructors. Doctoral students in residence who have completed Music in Higher Education can participate in teaching the elementary methods class and observing the externs; experienced teachers, therefore, are available to assist students in planning lessons and analyzing results. As a final step in the lesson plan, students write an evaluation of each teaching experience, which is filed in a notebook containing all the information and materials for each lesson.

Each extern is videotaped once during the semester, and his private viewing of the tape is an effective learning session. Tapes are a tangible record of student progress. By the end of the course students have become well versed in the teacher's eye view of classroom realities.

Semester's end brings sincere—and often surprised—tributes to the program. Self-knowledge gained through teaching is one of the program's most beneficial features, since it enables the prospective teacher to make informed decisions about his future when there are still other career options open to him.

Demand and Dean believe that the extern experience builds musical competence, pedagogical skills, and greater awareness and confidence. The independence and increased competencies of the students, more than any of the accolades extern teaching has received, are eloquent testimony to the program's success.

For more information: Marian Demand, Roger Dean, or Catherine Jarjisian, College of Music, Temple University, Philadelphia, PA 19122, (215) 787-8301.

ELECTRONIC MUSICIANS: WIZARDS OF SOUND

by Ronnie Dugger

Loran Carrier, a creative teacher, musician, and composer who studied under one of the leading figures in electronic music, Morton Subotnick, has fashioned an applied synthesizer major he says is "the first in the nation, as far as I can tell." Expanding lab space from room to room and paying for and making much of the equipment himself, Carrier has created his own electronic music program on the first floor of the building they call "919" at Virginia Commonwealth University, an urban state university in Richmond. He places premiums on students' hard work and their development of their own creativity; in return, they see him as an artist as well as a teacher to whom they are devoted.

The star component of the major is the synthesizer. Played on a complex console, it generates raw sound in wave forms, then controls and modifies the sound. Alone or in association with tape machines, traditional musical instruments, or any other sources of sound, the synthesizer makes music. Carrier is now supervising the construction in his office of a synthesizer interfaced with a small computer, on which he and his advanced students will compose.

Of VCU's 300 music majors, about 40 are in electronic music, and the limit of five have enrolled in the applied synthesizer major. However, 10 have already preregistered for the major next fall. They take courses in applied synthesizer, acoustics, electronic music (projects and techniques), and computer science, as well as the more conventional musical foundation and performance courses. Launched by Carrier on an experimental basis, the major is now a part of the permanent curriculum.

Young looking for his years and rather slight, Carrier is a quick, nervous man with dark curly hair and a mustache. From his belt is suspended an astounding collection of 30 or so keys; it is said that he once went onstage to perform, forgetting about them, and the audience heard their jangling as part of his music. Metaphors and analogies leap like grasshoppers from his talk. Seated under a large loudspeaker he built, he said, "I feel like Hercules under the world." He likened the difficult task of controlling the synthesizer to learning how to operate a 10-burner stove with only two hands.

Growing up on a farm in northeastern Montana, Carrier was fascinated by music in church and on radio. "I would just glue myself to the Metropolitan Opera or the Symphony." For four or five years he made his own real or make-believe instruments, clanging old plowshares for percussive sounds, blowing into things, singing records he pretended he was playing on a broken old phonograph. In high school he specialized in the clarinet, but quickly learned to play instruments of all kinds—piano, violin, oboe, flute, saxophone, organ.

For three and a half years, at the Queen of Apostles Seminary in Boston, he studied to become a priest, but when he became involved with a Jewish girl in the city the head of the seminary ordered him out. With half a year to go for the equivalent of a BA in philosophy, Carrier switched directions. He took his bachelor's and master's in music and composition from Catholic University in Washington, D.C., and a second master's in piano and composition from Washington Musical Institute. Starting his doctoral studies at the University of Maryland under "old-minded people," he became disenchanted and transferred to Peabody; but a phone call informing him that Subotnick would be teaching at Maryland once a week brought him back. Carrier committed himself to Subotnick and electronic music.

As if by chance, Carrier had also minored in computer programming, but perhaps an intuitive factor was at work. He still clearly remembers an IBM advertisement in *Life* which asked, "How Is Musical Composition Like Computer Programming?" After working as a programmer for satellites at Goddard Space Center, he came to VCU in 1973, mainly to teach a music foundation course.

He set up his first lab in what had once been a kitchen. His second was housed in a basement room that was actually a coal bin and probably should have been condemned. The toilet on the floor overhead leaked onto equipment in the makeshift lab below, and, according to an assistant, when state inspectors came around, Carrier "made sure that the plumbing would leak. All you had to

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do was flush the toilet upstairs. So that's what made it apparent we needed more room. It was all done with a great sense of humor."

Of the $30,000 worth of equipment in the four labs today, Carrier has lent the department about $9,000 worth. For instance, the two big speakers in Lab A are his. "We had to have good speakers," he explained—commercial ones would not survive the pure sound that assails them from the synthesizer. Painted black, obviously homemade, they symbolize Carrier's principle that "I'd rather do it myself than buy it." He picks up sound equipment such as patch cords from Navy surplus. In this way, his program has come to have the four labs eight synthesizers (including one that can be programmed with computer cards and has mechanical musical instrument simulators), the mini-computer, assorted tape machines, and peripheral equipment. Students do not have to pay lab fees, although they buy their own supplies.

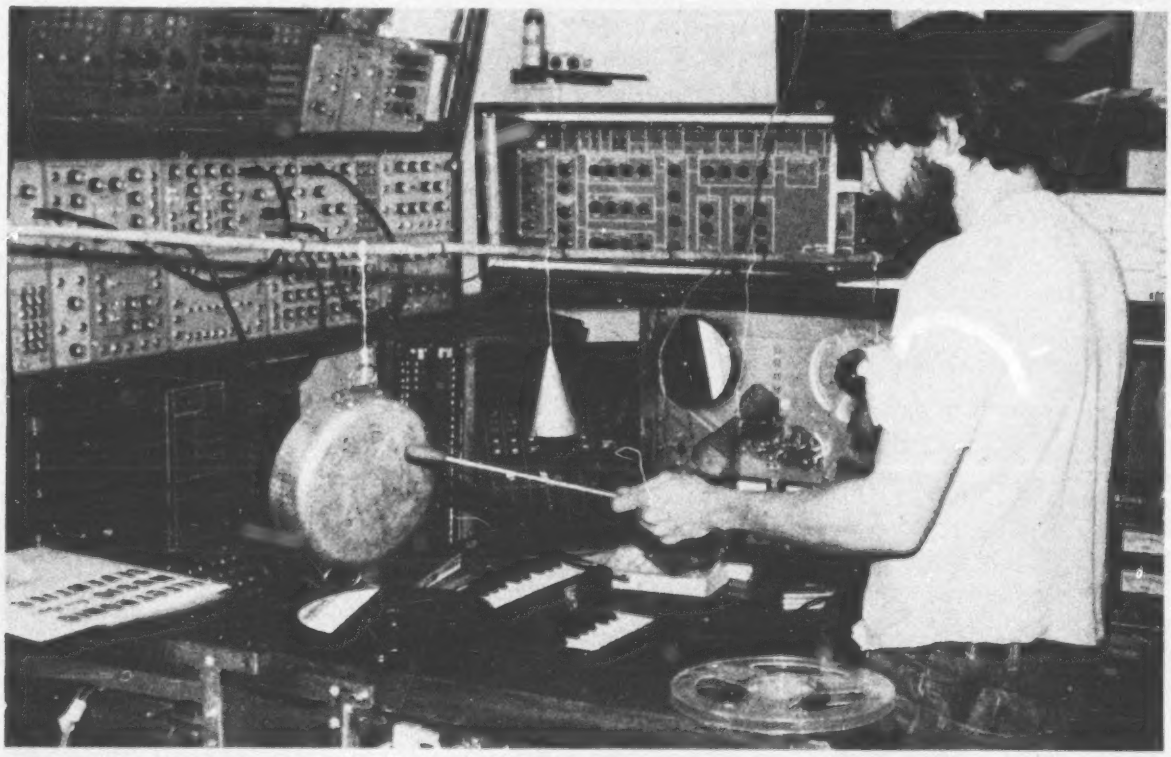
Carrier's first pedagogical principle is: Lay on the work. Word is getting around that his courses are hard, but in his syllabus for the electronic music program, he explains that electronic music "is not for the lazy, the dilettante, or the smatterer." He does not like those he calls "knob twiddlers," toying with the synthesizer like a kid plinking at a piano.

Secondly, Carrier is dedicated to originality, to what he calls "creative inventiveness." Walking along in the city he exclaims, "What I want is excitable students. I'd rather have a class of five excited students than ten who are half and half." He took delight in relating to one of his classes the suggestion from a book he is going to be assigning—if teachers give you ruled paper, write crosswise. He encourages beginning students, "The less you know about [music or electronics], the better. That gives you a tabula rasa." Bemoaning the fact that some departments are dominated by a leader's personality, he seeks to "enable the students to grow in their own directions." He will give help when it's needed, "but they find their own way."

The synthesizer, he believes, enhances a student's pursuit of a personal direction. Playing a clarinet, "you work the rest of your life making it sound like the ideal clarinet, as exemplified by so-and-so. But if I take up synthesizer, who am I supposed to sound like?" A student said about one of Carrier's compositions just played from a tape, "Oh, I want to do that." Carrier replied, "It's been performed already. Create something yourself." His approach, he maintains, is really quite reactionary: He wants to get back to the time of the wandering minstrels. Since a composer on synthesizer is also a performer, "What a fantastic thing this represents—the Renaissance idea of a performer/composer together."

Carrier believes that at VCU he has developed a middle ground between teaching the synthesizer as a gimmick ("an adjunct to rock or something to play pretty tunes on") and as an avant garde medium that is only for "a special class of people." He has developed a series of lessons in his as yet unpublished workbook in electronic music, which he thinks is unlike anything now used.

His classroom style is informal and spontaneous, and he says, "I think teachers have got to be very tolerant of others' ideas, even from those who may seem not to know what they're talking about." The teacher is "a first among learners." His teaching is also suffused with an ideology of creativity. Perhaps affected in this by Subotnick, he believes formal concerts and concert halls are aristocratic institutions. He would like



Lorna Carrier

A student records homemade percussive sounds for a source tape that he will later use in a composition.

Heff Munson

Carrier (seated) accompanies one of his students in a clarinet and synthesizer composition.

composition to be understood as a continuous event among artists rather than as a body of classics to which everyone reverently returns. In his view, "All sounds are equal—the screeching table, the clattering fork, voices. There is no more beautiful or ugly sound. A sound is viewed from its energy potential." Just as he believes the Catholic Church should be governed by the people, he believes music belongs to each new generation of musicians.

His democratic approach extends naturally to students. To one having trouble with basics he says, "We'll take our book out and go to the park and sing our heads off. Or hum or whistle." Reassuring another student, he says he is passing her on her test but proposes they "sit down and take about a half hour to go over it." In his class, his students speak freely to him and to each other; often their voices compete with the music they are playing.

Teaching the synthesizer, he imparts mechanical and electrical as well as instrumental and compositional skills. His 38 "SIPs" (self-instructional packets) for the introductory course cover such subjects as tape layering, exploring the ring modulators, techniques for using manual gates, uses for the high-pass filter, and the like. "What can three envelope generators do that I can't?" asks one of the SIPs. Even first-year students do three- and four-minute compositions using different electronic styles. In a published handbook/manual, "Electro-Acoustic Music Projects," he recommends that "electro-acoustic practitioners work with scientists, engineers, and other technologists," as well as with other artists. One sees conceived here a new humanist who does not distinguish scientific from artistic reality.

Learning experience:
An applied synthesizer major, including the following courses:
Introduction to Electronic Music. No prerequisite. Enrollment: 10-24.
Advanced Control Techniques. Prerequisite: Introduction to Electronic Music. Enrollment: 5-14.
Applied Synthesizer. Prerequisite: Introduction to Electronic Music. Enrollment: maximum size 10.
Projects in Electronic Music. Prerequisites: Introduction to Electronic Music, Advanced Control Techniques, and permission of instructor. Enrollment: 7-20.

Similar programs:
Many colleges have a basic course in electronic music. None has an approach that allows students to major in electronic music composition.

Contact:
Loran F. Carrier, Music Department, Virginia Commonwealth University, Richmond, Virginia 23284, (804) 770-8713.

Students taking Carrier's Projects in Electronic Music course do a major project and two minor ones, meeting with him privately one hour a week and as a group another hour. His students Ann Munson, studying textiles, and her husband Heff, a business major, have made and locally marketed one LP record using some electronic sound and are working now on a second LP using more advanced sounds. Students have gone from Carrier to professional recording engineering, sound work for animated films, and teaching. Charley Phillips is putting together an electronic LP in jazz-rock; Billy Kidd, Carrier's part-time teaching assistant, is working on an electronic opera based on Caliban in Shakespeare's *The Tempest*.

In his "Electro-Acoustic" manual, Carrier seeks to spark students into trying a number of projects with synthesizer, "found-sounds," conventional voice and instruments, and extra-musical elements. He suggests that students compose a sound track on tape, a radio station "logo," background music for a play or TV production, a sound track for a film, music for an operetta or a sound and light show, and a sound score to accompany a poetry reading; that they re-create non-European melodies or the sounds of indigenous instruments; use the synthesizer to perform mathematical functions; use the computer in making music; score a synthesized composition; use brain waves as a voltage source in the synthesizer; design a keyboard synthesizer or a digital module; and orchestrate a choral work or a work in the "switched-on" style (using a conventional composition as the base).

During his two-hour sessions for introduction to the synthesizer, Carrier first surveys aspects of the subject, then has a period for "creative inventiveness," and finally devotes time to students' "competencies," or demonstrations of ability. Carrier opened one class by playing parts of four versions of Moussorgsky's "Pictures at an Exhibition"—an original rendering for piano, Maurice Ravel's traditional orchestration, a new orchestration for superorchestra, and finally Isao Tomita's electronic rephrasing of the work. In the discussion that followed, Carrier pointed

out that Tomita had drawn on Russian culture of the period, introducing sounds of a Cossack chorus and the balalaika, and had rendered chickens' cluckings with comic literalness—in short, he had recomposed the work electronically. "It's good he went his own way," a student observed.

For the inventive part of the class, Carrier had brought a joy-stick, a gadget used, for instance, to adjust a car's side mirror, to steer, or to direct hobby planes in the air. He showed students the sounds that the joy-stick, plugged into the synthesizer, could control. For her demonstration that day, Susan Norrisey, pulling plugs, switching knobs, grimacing, created a percussion gate in the synthesizer. "All righty," Carrier said, and went on to have another student create a pulse-activated gate, with which the professor then showed him how to control "that sound that he's got there." A student who was asked to accomplish gating with variable amplitude output said dubiously, "I've been screwed up all week," to which the professor replied, "Well, let's see if we can unscrew you a little. Most of us are screwed up most of the time; you're just the only one that will admit it."

When a student asks a silly question, such as, Is Beethoven better than the Beatles? Carrier always answers in terms of yaks. He might reply, for instance, that the answer depends on whether the yak is pregnant or not. Students have presented him, therefore, with a poster on "Yak Facts," which is displayed on a wall in the teaching lab.

An advanced class was devoted mostly to students' performances. Bryan Harvey played his "Composition No. 2," made of sounds that suggested space, droning motion, spinning curves, ascent, descent. John Hesson, whose life's work will be to compose, ran a tape of his making as he played the synthesizer, adjusting dials and patch cords, producing interesting sounds like water burbling in mathematical patterns, excited electrons in rhythm, sounds of blurping fluid. With the lights in the room dimmed, John busied himself in front of the console and the adjacent tape machine, his long yellow hair flicking behind him as he moved, and Carrier said, "You can almost see why the term 'wizard' has grown up," to describe electronic musicians. As John's music became the integration of interacting zooms, Carrier made his point that John was creating not a composition but an instrument in motion that he could play as he would.

Carrier put onto the tape machine part of a composition of his own, "Crash Boom Bamg," and had student Peter Chauvette improvise an accompaniment on the synthesizer. Having fun, but also aware that he was performing, Peter produced an exciting interaction of crazy African bong-sounds, pounding the keyboard like a drum, then like a typewriter. Later all the students worked together to produce a synthesized simulation of Asiatic music. Kibitzing, Carrier sounded like this:

"You got too much duration.... Don't use square waves—look at the Hertz the waves are at, how can I hear one Hertz? There we go—turn it up to three o'clock—there you go.... Get your tonality going, twice as slow.... Bypass the envelope control.... Move your male species there and put it into the filter. Control the oscillator. See, there's a sampler control there. We want to change the pitch. No, we're changing timbres, not pitch yet.... All righty.... Your sampler is much too fast. Sampler is about zilch o'clock, turn it to about 12 o'clock.... Trigger on?"

It was as if the five students and Carrier were in combat with the machine, fighting to control it, but at last the pro-

Music for the Fun of It

Music educators are used to coping with many different varieties of students, from novices to trained musicians. But when assistant professor Robert Wessler first came to teach music at the University of Wisconsin at La Crosse, he was faced with an unusual challenge—a group of beginners who would be intimately involved with music for most of their professional lives.

Wessler's students were enrolled in the University's Department of Recreation and would graduate into jobs as recreation directors for camps, resorts, and municipal agencies. They would be spending the bulk of their working hours devising and performing in musical programs. Part of Wessler's task, in his course Music in Recreation, was simply to tutor these nonmusicians in the simplest concepts. A more difficult requirement was that he leave his students with enough enthusiasm about music and their own musical skills for them to infect others.

The job was a difficult one. Wessler found many of his students unable to keep time to a beat, to read musical notations, to play an instrument, or to sing from memory any songs but camp songs. All were unwilling to sing alone before their peers, and many were embarrassed even singing in a group. But Wessler persevered, feeling his way with a mixture of boundless energy and commonsense psychology. After five years he has devised a curriculum that imbues his students with both knowledge and musical poise.

Wessler reasoned that students would learn to be cheerful and competent purveyors of music not in a classroom but on a stage before a live audience. He provides ample opportunity; during the semester they spend in Music in Recreation students are required to plan their own musical programs, which they then present to community groups. Each student takes part in one program for children and one for senior citizens, both staged by groups of five or six students. The entire class participates in a final program.

Students have about four weeks to ready each round of presentations. Most of the two and a half hours a week they spend in class is devoted to preparing for their ventures on stage. Wessler gives presentations exploring the problems of repertoire, materials, and performance techniques. Students then divide into workshops to plan and rehearse. The class reassembles to hear the results, as students perform, lead group singing, accompany group singing on instruments, and deal with the advice of their instructor and peers.

To round out their musical introduction, students are required to take one additional lesson per week in

fessor told them, "So here is a synchronous system all timed from one source."

In evaluations, students rank Carrier at the highest end of the scale in all categories. One wrote that the best aspects of the course were "Carrier's personal approach and his overall intelligence in so many areas tied into the specific course he was teaching." Criticisms went, in the main, to a need for more and better facilities; appreciative comments stressed the results of Carrier's commitment to each student's potential. "Stimulates creativity," wrote one student. And another: "Individuality is encouraged. The course emphasizes a broader system of 'music' than do others."

Although they sign up for lab a minimum of three hours a week and the labs can be used 24 hours a day, the students seem to want more. "I've come in here and stayed all night, with nobody coming in," Allison Evans said. To avoid intruders, Bryan Harvey said, "it would be nice to have this thing out in the desert." Working with the instrument, sometimes in the dark, John Hesson felt "you lose total track of time."

In his department, Carrier says, "my support could not be better." He was moved from assistant to associate professor in three years and has a part-time faculty person working with him teaching synthesizer. On equipment, he adds, his chairman has given him every assistance he can ask for. "It's just that we have grown exponentially in need, and the budget doesn't work that way."

Resenting the time science and math take away from his students' work in music, Carrier wrote his chairman that far from being related to music as they might well be, science and math courses at VCU, "to a one, are taught from a departmental outlook." Many disciplines have argued over the need to relate basic requirements to the major and Carrier has joined the controversy, proposing new courses to satisfy math and science requirements for music majors—computers in music, electronics in music, and math-based music theory systems (on which he is writing a book). He has not had much luck with these attempts to develop more applied relevance for his majors, but the physics department did agree to cross-list an acoustics course he designed to include more physics, math, and lab work.

Carrier is still an active composer. "My music is not like anybody else's," he says. He has not tried to have anything marketed, he explains, because he is so busy creating and teaching now he doesn't want to take the time. But he has produced dozens of compositions of all types—for live chorus, orchestra, brass quartet, electronic performance. Recently he completed a piece for synthesizer with Dixieland band. Concept-oriented, he begins with elusive qualities—shape, texture, melody, rhythm, or timbre—and "then I'll use what I need to bring them out." He is now working on "Piano Quartet" for "a piano and three functions," to be played from four speakers.

For last year's Halloween concert in an open courtyard at VCU, he did a piece, "Lupus Organis," made with recorded wolf calls and a pipe organ. Dozens of neighborhood dogs became madly agitated during the performance, and next Halloween Carrier is going to record their howlings and make that part of the music, too. Meanwhile he gives private instrument lessons, and three times a week he plays the piano for the Richmond Ballet, plowing most of these earnings back into equipment for his department. Because of a girl the seminary turned him away from the priesthood, but not from zeal or service; benefiting from the Church's loss, his students admire and follow him. ■

guitar, autoharp (supplied by the University), or recorder. These lessons provide the most technical musical training of the course, teaching the basic theory and notational reading students need to ease their debuts. As a bridge between lesson and performance, Wessler often organizes the class into a kitchen or "skiffle" band to consolidate their newly acquired instrumental skills.

Students usually present some fifteen programs during a semester. Wessler has no trouble finding audiences: In the past few years he has been swamped with requests from community organizations. By the time the course draws to a close and students present their final large program, they have been transformed into a corps of sophisticated, uninhibited performers.

As students progress they are aided by constant feedback from Wessler and other members of the class. They are expected to attend all the programs, both to provide constructive criticism and to gain perspective on their own efforts. Wessler videotapes each program and evaluates it according to a checklist which includes such criteria as variety, appropriateness of the theme for the audience, orchestration of group singing, and performers' flexibility and fluency. From time to time students fill out these evaluation forms themselves to develop a sense of their capabilities.

Enthusiasm for Wessler's course has been overwhelming. The increasing enrollment has forced him to institute a prerequisite—a semester of basic piano—to reduce the class to a manageable number. More important evidence of the course's success comes from sources far from the campus. Students applying for admission to the University's Department of Recreation mention that Wessler's course is one of the major attractions of the Wisconsin program. And Wessler's ex-students, interning in their field or holding full-time jobs as recreation leaders, have sent back unsolicited kudos. Meanwhile, the University's public relations office, noting the rapport Wessler's programs have established between the University and the city of La Crosse, has suggested that a special television presentation on his course be produced.

"It has helped me develop a perspective on music education I could never have found otherwise," Wessler says. "Too often we music educators get so bound up in educating musicians that we forget about the 'real people.'" Wessler has enabled scores of real people to bring music to other real people.

For more information: Robert A. Wessler, Music Department, University of Wisconsin, La Crosse, WI 54605, (608) 784-6050.

THE DO RE MI'S OF TEACHING MUSIC

by Gary MacEoin

A change in California's teacher licensing law in 1970 started Joseph W. Landon on a series of experiments that have put California State University at Fullerton on the music map. The Music Educators National Conference (MENC) now lists Fullerton as one of only 22 colleges in the United States having "an innovative and exemplary preservice curriculum" for music education majors. "One thing that has helped," says Landon, who inaugurated the music department at Fullerton 17 years ago and is now coordinator of music education, "is that the University administration has always encouraged the music department to experiment."

The 1970 law provided for cooperation between the University's instructional staff and the professional staffs of public school districts in training college students who were specializing in a single subject. That included music majors taking the BA plus 30 graduate units in order to teach choral, instrumental, or general music at the elementary and secondary levels. For a year, university music and music education staffs and their students met weekly with public school administrators and music masters from high schools in Orange County where Fullerton is located. The program they hammered out was based on an MENC model, calculated to turn out teachers who could perform, organize, and describe music. It was adopted by Fullerton in 1972 as a competency-based approach applied in public schools that serve as laboratories for this program.

Six unique features mark the CSUF program:

- competency-based instruction for which the student assumes a major role in assessing his own progress;
- skill classes in such areas as instrumental, vocal, keyboard, and conducting taught in an analytic-inductive manner designed to simulate instructional problems;
- application of competencies in off-campus public school laboratories beginning in the sophomore year;
- the use of university instructors as co-teachers and as coordinators in these off-campus laboratories;
- a reversal of the traditional order of methods courses, placing them near the end of the field work to ensure better understanding of the relation of theory to practice;
- a capstone seminar during the final (fourth) semester of field work in which the student teacher uses all of the tools of analysis and assessment, including numerous videotape observations of himself and others, to sharpen his instructional expertise.

As defined in the program, performing involves skills for producing musical sounds: using the body as an instrument; using the voice; manipulating environmental sound sources; and playing instruments. Organizing relates to the creation of music: determining the sequence of musical sounds; developing

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musical ideas spontaneously through improvisation; communicating musical intent through composition or arrangement. Finally, describing embraces the skills of listening to music and demonstrating understanding through fundamental movement or expressive dance, visual representation (including diagrams and abstract drawings), verbal description (images and technical terminology), and the use of both traditional notation and contemporary notational schemes.

Having reached agreement with the public school administrators and master teachers on the skills a music teacher needs, Landon and his colleagues devoted many hours to developing a program that would produce the desired results yet be flexible enough for modification in the light of experience. First of all, it was agreed that the prospective teacher has to carry a far heavier load than music majors planning other careers: The same level of performance competency in voice or a single instrument is demanded in both cases. But the teacher candidate, in addition, has to acquire the variety of competencies needed for the elementary, junior high, or high school classroom.

A prospective teacher specializing in the violin or other stringed instrument, for example, must also be able to perform a normal classroom repertoire (say, a Chopin prelude and patriotic and community type songs) on the piano, to play major and minor scales, play accompaniments, sight read, reduce scores to two hands, and improvise. He or she must also develop a basic understanding of the human voice as a musical instrument and an ability to use it confidently and effectively in singing or in a teaching demonstration. The candidate must master traditional conducting patterns and be able to convey to a small or large group such basics as the preparatory beat, tempo, meter, dynamics, attack and release, style and phrasing. When conducting, he or she must be able to identify errors in pitch, rhythm, or phrasing and to distinguish which member of the ensemble or which instrument is responsible for each error.

Similarly a vocal-choral teaching major or elementary classroom musical specialist must not only know the "anatomy" of voice production but must have skills in many of the same areas as the instrumentalist—including instrumental techniques.

Additional competencies were also set out. Some relate to music theory, others to the history of music and knowledge of musical literature; still others pertain to ethnic traditions. Students are expected to become familiar with performing traditions of the principal instruments used in oriental (Chinese, Japanese, Indonesian), Asiatic Indian, American Indian, and African music and to know the nature, substance, and cross-cultural influences of Mexican and Afro-American music.

In music, as in any other field, a teacher must not only possess knowledge but be able to communicate it. Thus, a key characteristic of the Fullerton program is the way the two functions interlock. Competencies are applied in the field as early as possible. Exposure to the school classroom normally starts in the sophomore year. The cooperative program with the public schools enables Fullerton students, individually and in small groups, to work under the supervision of master teachers and university faculty in actual classes at different grade levels.

Of Fullerton's 20,000 students (11,200 full-time equivalents) 600 are music majors. About one music major in four enters teacher training; and because the field work and wide range of competencies call for high motivation, intelligence, and stamina, these tend to be the cream of the crop. What is more, they are committed to sharing knowledge and insights: Every member is actively involved in the work of others. For example, so that students can share instrumental competencies, a class splits into units of three or four, each student practicing on the instrument in which his neighbor specializes. Thus, the specialist becomes the instructor for his neighbors, and the class instructor's role is limited to going from group to group usually just listening, occasionally offering a suggestion. The untrained ear is overwhelmed by a medley of disparate sounds coming from all directions, but those involved have learned to shut out distractions and concentrate.

Where the Fullerton student will do field work is determined, after consultation with each student, by the university music staff in agreement with public school administrators and master teachers. Each student is assigned to two schools at different levels—grade, junior high, or senior high. Schools are chosen that will expose the candidate to a cross section of the population.

In the sophomore year the student does clinical practice as an aide, for a minimum of 45 hours, in the two designated schools. The master teacher is the direct supervisor, with university supervision by the campus instructor. There are discussions between master teachers and students, as well as regular university seminars. Guidelines for the master teacher stress that the candidate should at first work with pupils in prescribed but limited ways. Thus, the student is gradually familiarized with the scope of a teacher's responsibilities and begins to analyze the teaching-learning process.

Meanwhile, the candidate has been briefed on his or her role. It is not just to sit and watch but to observe the master closely, to volunteer ideas, suggest things that need doing, perhaps to help a pupil in an area in which the candidate has the needed expertise. By semester's end, he or she should be able, under supervision, to give limited full group presentations. For large group presenta-

Learning experience:
Preprofessional and Professional Competency-based Teacher Education Program at California State University, Fullerton. No prerequisites, although more capable music students who appear to have the necessary musical, intellectual, and personal qualifications are encouraged to enter.

Other descriptions:
Handbook for Students, Master Teachers, and University Supervisors in Music Education. California State University, Fullerton, 1977.
SEC-TEP Handbook. (Handbook of the Secondary Education Cooperative Teacher Education Program), Division of Teacher Education, California State University, Fullerton, 1977.
The School Music Program: Description and Standards. Reston, Va.: The Music Educators National Conference, 1974.
Teacher Education in Music: Final Report. Reston, Va.: Music Educators National Conference, 1972.
Leadership for Learning in Music Education. Costa Mesa, Ca.: Educational Media Press, 1975.

Similar programs:
Other inservice and preservice programs described in the MENC booklet *Teacher Education in Music.* None precisely on this model, however, to our knowledge.

Contact:
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tions lasting 10 to 15 minutes, a written plan is submitted in advance to the master teacher.

In the junior year, the student takes an on-site practicum in school materials and techniques, but now the approach is more structured, the assignments of wider scope. Though still not independently responsible for a full class period, the candidate now takes more initiative for a wider number of activities. These include tutoring pupils on a continuing basis, conducting periodic section rehearsals, giving demonstrations for the whole group, and conducting or giving a full group presentation on occasion.

One instrumental practicum in a nearby junior high involved Fullerton students with a class of 25 to 30 pupils: the majority white, a substantial minority Chicanos, and a few blacks and Vietnamese. The class was conducted by John Benham, Fullerton's coordinator of music; master teachers from the junior high; and a dozen or so Fullerton students. It was a beginners' group, children who were hoping to get into one of the school's regular bands.

Each of the Fullerton students was assigned to conduct a simple orchestral piece while Benham and the others took notes for later discussion. Each was given a specific instrumental problem to deal with, such as stressing the proper position for playing, or the aesthetic impact of various tempos and keys. Most were quick to recognize any source of trouble and took a minute to work with performers separately.

After such exercises the Fullerton students sit down with their professor and the master teacher of the class for a 20- to 30-minute review. Typical cautions and suggestions from Benham's class: "Be less nervous; relax and you'll do even better." "Tubas were not playing E natural. Have them play E natural by themselves, then E flat, then once again E natural. Then have the entire group replay that line." "Try to isolate the individuals who are playing wrong notes. Take each in turn and deal with the problem." "When you ask a question, you shouldn't answer it yourself—make the class answer it."

In a choral practicum conducted by Fullerton's director of choral music, John Cooksey, equal attention was paid to detail. Again several students conducted, but here every member of the group had a chance to demonstrate such techniques as breathing, phrasing, tone production, style, and expression. In all classes, the instructor remains in control—not to give answers, however, but to spur the students to identify for themselves what is missing, what needs more work. Videotape is used extensively to record each student teacher in action and permit more scientific analysis of good and bad elements in the performance. Tape recordings of performances by the public school pupils under student-teacher direction enable the group to hear themselves and analyze their teaching strategies and problems. Professional level classes can be kept small, not more than 10 or 12 in each, because the students play this active part in their own training.

At the end of the junior year, the instructor makes recommendations for admission to the professional teacher education program on the basis of how well each student is performing. "This is one point at which our early exposure of prospective music teachers to classroom work really pays off," says Landon. "We have detailed records to establish

Jazz for Credit at North Texas State

For nine hours a day, except on Fridays, you can hear nine student bands in succession play jazz in an ex-cafeteria on North Texas State University's Denton campus. Be it be-bop, Bacharach, or a student piece, you'll always hear the performances being disciplined toward perfection. Leon Breeden wouldn't have it any other way. He wants dignified professionalism and he gets it; in fact, one reason he clears the hall on Fridays is to free 180 or so young jazzmen for weekend work with the likes of Woody Herman and other professionals who have guest-conducted and hired NTSU students.

Breeden and eight graduate assistants teach Jazz Lab Bands, the core course in a phenomenal jazz education program now in its thirtieth year at NTSU, where the subject was pioneered. It's offered at a School of Music that ranks second in enrollment behind Indiana's, and though most students are music majors, they needn't be. (According to Breeden, program director since 1959, one of his best trumpets was taking an MA in biology while working on the side with Woody Herman.) Any enrolled student who auditions successfully can take jazz for credit and remain in the course throughout his stay at the University. The only obligations, after assignment to a band, are to maintain skills, attend class regularly, and show a willingness to share in the serious play necessary to keep jazz at NTSU at a high level.

The growth of the program after a hesitant start has been remarkable. From its beginning with just seven students, it now auditions some 375 young musicians a year, a few from as far off as England, Canada, and Australia. Lab bands have played the White House and toured internationally for the State Department. They annually record, as educational ventures, well-received, nonprofit jazz albums; the 1975 edition was nominated for a Grammy. Not the least measure of success has been the spread of college jazz festivals and courses throughout the country, many of the latter taught by NTSU graduates.

Candidates audition solo, in a section, and with a band. Those who show skill and involvement at all three levels get into Jazz Lab Bands, though not necessarily as regular performers; competition for spots is keen and nearly 200 audit and take remedial work. Breeden teaches and conducts the top 1:00 O'Clock Lab Band, named for the time of day it meets. ("I wish it were mine," said the late Duke Ellington after sitting in at a White House performance.) The others, nearly as proficient, are led by graduate assistants. Both copyrighted and student compositions and arrangements are introduced in class and examined microscopically—hence, "lab" bands. All aspects of musicianship, as they relate to the

how suited they are for the exacting life of a teacher. Indeed, we find it progressively less necessary to have to make the decision to turn a student down. He or she, in the light of field experience and informal exchange with fellow students and faculty in evaluative seminars, has already decided to try a different career in music."

The senior year starts with an extern (breaking-in) or "methods" semester. Each morning is spent under the direct supervision of a resident instructor in one of the four high schools that have been designated Learning Centers. Afternoons are spent on the Fullerton campus in classes that comprise the professional education sequence: Foundations in Secondary School Teaching, and Principles and Techniques of Teaching Music in Public Schools. Here the students plan the work they will carry out during the second semester when they will be interns. They learn the policies and procedures of the school and the classes to which they are assigned.

As externs in a Learning Center, students may do part of their teaching in a nearby school in order to work with classes at two different levels. Every extern has at least one class of full (primary) responsibility at each level and one or two classes of aiding (secondary) responsibility. The extern must also attend school and class functions (including trips, festivals, and programs), prepare materials, work with individuals and in the music library, and become involved in other school activities.

In the process of discovering the attributes of music, great emphasis is placed on the element of pleasure. The production of pleasurable sounds from a musical instrument is usually described as "playing." Landon finds the expression very apt. Conscious that children have no monopoly on play, he insists that the totality of teaching depends upon much more than technique and methodology. The personal qualities of the teacher constitute a key factor; and since learning is essentially pleasurable, a sense of play should permeate all teaching. Thus, the music education program has a clear commitment to technical quality, but not as an end in itself. The primary objective is to produce aesthetic pleasure in the performers that will radiate to the listeners and inspire a lifelong appreciation in both.

"We have an important measure of the program's success," Landon points out. "The hiring rate as teachers for our music-teaching graduates sometimes goes as high as 80 percent but is consistently above the national average for all teachers, which runs about 50 percent in recent years. Only four states have an undersupply of music teachers: Nebraska, the two Dakotas, and Wyoming, all remote from the big centers and as such less attractive to graduates. The others are in balance or oversupply. And we believe our employment rate would be even higher, in spite of the cutbacks in budgets that all too often first affect the fine arts, if some graduates did not limit their search to one location either from personal preference or because a spouse is doing advanced study there. So, putting all the factors together, we believe we have convincing proof that we have a formula that both enriches our students and gives them superior qualifications and motivation for career success." At Fullerton the work of Landon, his associates, and his students is play: discriminating, judgmental, analytical, synthesizing, imaginative play. ■

unique nuances of the jazz idiom, are taught and practiced; moreover, Breeden, whose background includes performances with symphony orchestras, encourages students to join classical ensembles elsewhere in the School of Music so as to improve their musicianship.

To deepen involvement, students are offered supplementary jazz courses. Improvisation, a prerequisite for which is a basic theory class, meets twice a week in small groups at scaled levels: without rhythm sections for beginners, with them for the more advanced. (Two improvising groups this year are exclusively guitar ensembles.) Forms in Jazz covers arranging, TV jingle writing, and film scoring. Finally, Perspectives in Jazz is taught by Breeden in two semesters: The first surveys jazz from its African origins and the second covers the historical development of the NTSU lab band program itself. Says Breeden: "I think it's important for us to know where we ourselves came from."

They have come a long way. NTSU classroom jazz actually had a tentative start in 1942 when Gene Hall, a graduate student, was asked to teach dance band arranging to two special students. Word got around and 15 enrolled. Hall earned his degree and left Denton but, on the invitation of then School of Music Dean Walter Hodgson, he returned in 1947 to direct jazz education's first formal program, offering a bachelor of music degree with a major in dance band.

Curricula evolved gradually, as did general academic acceptance of lab band work. But the bands' concerts were clearly first-rate and gave the program impetus. Music publishers began providing scores designed specifically for student bands, and several jazz leaders donated arrangements written originally for their units. Later, Stan Kenton donated his entire library of music.

Today, under Breeden's direction, the program is profoundly immersed in the jazz experience. Its courses, plus appearances by guest artists such as Marian McPartland, Clark Terry, and Pat Williams, provide students with a knowledge of differing styles among performers, composers, and jazz eras. NTSU's own alumni are sources of inspiration; clarinetist Jimmy Giuffre is one of hundreds of distinguished lab band graduates.

The issue of academic acceptance may still be controversial on some campuses, but it appears to be behind NTSU. The old cafeteria, the program's fifth temporary shelter in three decades, is to be replaced by a steel and stone recital hall now under construction. Jazz education in Denton will have a permanent home.

For more information: Leon Breeden, NTSU Jazz Lab, Box 5038 North Texas Station, Denton, TX 76203, (817) 788-2401.

HOW TO MAKE IT IN THE MUSIC BUSINESS: MIAMI'S SUCCESS STORY

by Judith Miller

Music may, indeed, be the proverbial food of love, but it is also the eighth largest industry in the United States. In the coming year, Americans will watch countless movies, television programs, and advertisements—all with musical soundtracks. They will rent or buy thousands of musical instruments. Music in all forms will be written, conducted, played, taped, copyrighted, promoted, and recorded. Jazz clubs, concert halls, discotheques, and theaters across the country will feature live performers. Muzak will fill the air in department stores, restaurants, and even buses and trains. This year, Americans will purchase an estimated $4 billion worth of records.

Music, in short, is big business. And this fact has made a profound impression on the School of Music at the University of Miami in Coral Gables, Florida. While traditional conservatories and music schools are still turning out hundreds of talented, highly trained musicians and music teachers each year who—alas—are often unable to find work in their chosen field, the University of Miami's School of Music has established two new interdisciplinary degree courses that virtually ensure that their graduates will be employable within the industry. Graduates of the Music Merchandising program, which prepares students for careers in the business end of this diversified industry, have an almost perfect placement record; since its establishment in 1965, nearly 100 percent have found jobs in their fields. And although the Music Engineering Technology program is in its first year, school officials are confident that its graduates will be equally coveted as engineers by the industry.

Judging from interviews with music students, faculty, administrators, and their colleagues in the field, Miami's interdisciplinary approach to music is an undisputed success. The new programs, however, only reflect the emphasis on creativity and imagination that pervades the entire School of Music.

The School exudes an aura of success. The visitor is escorted through an impressive 10-building complex—an almost familial enclave within the 18,000-strong student community. The music community's "town hall" is the Maurice Gusman Center, an auditorium where some 300 live concerts a year are performed. Gusman, a modernistic structure that dominates the enclave, was built two years ago at a cost of $2.5 million. Its interior is as striking as the facade. The concert hall holds an audience of 600. Continental seating assures each member of the audience comfortable listening and an unobstructed view of the stage. Decorated in an orange and gray motif with an acoustical curtain as a backdrop, the hall is spartan, yet elegant. Acoustically, it is superb; it was designed by Cyril Harris, the specialist who salvaged the acoustical disaster known as Avery Fisher Hall in New York City.

Gusman Hall also contains the School's administrative offices, including that of William Lee—musician, conductor, teacher, composer (winner of several of music's highest awards), and dean of the School of Music. His office is a comfortable, multiroom complex deep within Gusman Hall. There are no windows, but the rooms are perfectly cooled. There are modern paintings on the walls, piped-in quadraphonic music, and a Steinway piano on which a bust of Beethoven sits proudly. Lee, in sport shirt without tie, relaxes in a black leather chair. "When I came to Miami as dean in 1964," he says, "we had about 150 students; today we have about 725. That makes us the country's largest school of music in a private university."

Growth in enrollment is not Bill Lee's only achievement. Most of his colleagues give him credit for increasing the School's prestige within the academic and professional music communities. "We were a rather small, traditional school when Bill arrived; we didn't even have a doctoral program," says a fellow faculty member. "Now the School is truly innovative and unconventional. We offer not only standard music courses but programs in orchestra, band, jazz, classical guitar, electronic music, and an interdisciplinary degree in music therapy, which combines music and psychology, as well as programs in merchandising and engineering."

The variety of programs is truly staggering: Some 18 programs (a cross between majors and departments) are offered at the School. There are nearly 60 performing ensembles: about a dozen choruses, a couple of dozen jazz ensembles, two brass choirs, a studio jazz orchestra, and even a tuba ensemble.

JUDITH MILLER is the Washington correspondent for The Progressive.

Miami's top jazz band won first place last year among 14 competing university ensembles at the international jazz festival at Montreux and has already cut two albums.

The School's energy is almost palpable. Coral Gables may have a reputation as a sleepy, tourist-oriented city—but this does not apply to the School of Music. The jean-clad students jam the classes, spill out onto the lawns, and fill the practice rooms throughout the day and into the night; even at two or three o'clock in the morning, the strains of students playing in ensemble or practicing individually can be heard wafting out of the complex. Music is a way of life at Miami, especially since many of the School's students and 60-member faculty play professionally in nightclubs, concert halls, and hotels in the area.

Participants in the Music Merchandising program are among the School's most enthusiastic students. The verdict of the seven majors with whom I spoke was unanimous: The program is challenging, varied, and—above all—practical. They are confident they will find interesting jobs in their respective fields, despite the wide variety of employment goals. Susan Schneider, a junior, wants to own or manage a studio, not an unrealistic aspiration thanks to the training she is now receiving. Randy Wilcox, also a junior, wants to promote records; he has already lined up a job at a record company. Dick Winzeler, a senior, wants to write music. Another student wants to manage concert halls.

What accounts for the optimism about employment prospects? "The placement record of previous graduates," replies Gary Doberstyn, a graduate assistant. "The program's reputation is great. People in the business know we're well trained, so the 60-odd graduates of the merchandising program all have good jobs. Sure, there are lots of college graduates with music degrees, but very few with a sense of the business of music."

The merchandising program is extremely rigorous. It covers a wide range of subjects, including copyright law, recording, retailing and production, manufacturing and importing instruments, music licensing, and scores of others. Courses are about evenly divided between the music and business schools. By the end of their four-year course, students have taken one third of the courses needed for a master's in business, in addition to having completed all the courses required by the music school.

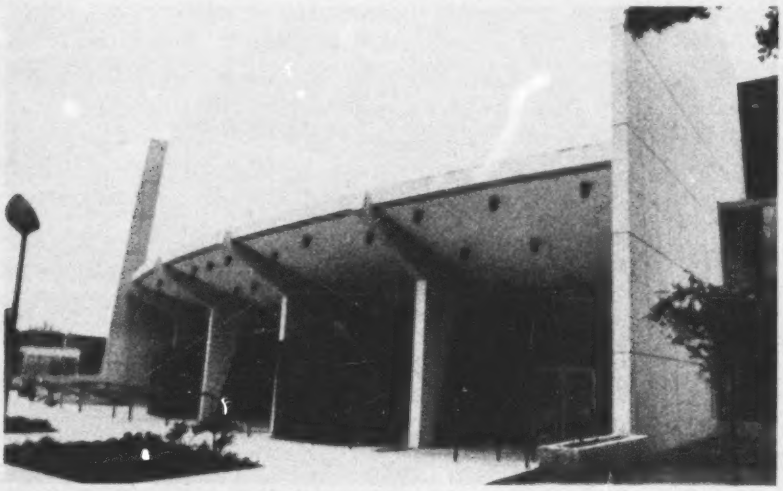
The core course of the program is music merchandising. It is taught by Alfred Reed, reputedly one of the top five composers of band music in the country. Reed has had a diversified career, ranging from writing, conducting, and teaching to music publishing. Together with Lee, he designed the merchandising program. Reed seems to mesmerize students with his firsthand knowledge of so many aspects of the music industry. He demands perfection in areas that tend to be less heavily emphasized by other music schools, such as copyright law and licensing. "Whenever we object to the tons of material on copyright law," says Susan Schneider, "Reed always reminds us that it's cheaper to learn it here than in a courtroom."

The program offers an optional, senior-year internship in the student's chosen field. For 15 weeks, a student receives $50 a week from an employer, plus transportation to the company's city. "Almost all of the firms want the students to stay on after their internships," Lee reports. Although internships are optional, almost all of the students look forward to their on-the-job experience.

While many universities and trade schools offer courses in music merchandising, the University of Miami is the only college in the country that offers an accredited degree in that field. Lee reports that there have been inquiries about the program from nearly 40 schools across the country each year. Can the program be replicated? "We think so," he says. "If a university is willing to work out an arrangement with its business school and is willing to create the requisite courses, why not?"

Some of the students disagree, however. They attribute the program's quality and their enthusiasm largely to Reed, whom they describe as "irreplaceable." There is a consensus that the program suffers during Reed's frequent absences.

The other major complaint from students is that the curriculum is too demanding, too inflexible. They point out that if a student opts for the senior year internship, he or she can take only one elective during the four-year program. They also say that many of the students



Carroll D. Price

Gusman Hall is part of the 10-building complex that makes up Miami's School of Music. At right, students work on the 24-track mixing control board in the Hall's recording studio.

cannot finish the degree requirements in four years, that many of them have to stay on a semester or two longer to complete their studies. "The heavy course load becomes a real burden if you consider that most of us are paying our own way by working part time," one student observes. "Parents, after all, may be willing to support their son the future doctor—but not many parents are willing to pay this kind of tuition or their son the would-be record producer or saxophonist."

Tuition at Miami is $3,500, and total fees run about $6,300 a year. There are, however, more than a hundred scholarships awarded at the School of Music; nearly 15 percent of its students receive some financial assistance. Administration officials have emphasized fund raising within the private sector to support the School's ambitious programs, and they have been rather successful. The School recently received about $1.5 million of some $4 million bequeathed to it by the Eugene Dreyfus estate. In addition, the School has its own fund raiser, a situation matched only by the medical school.

Such resources have made possible the School's other innovative, interdisciplinary program, Music Engineering Technology. Though the program is relatively new, Lee and other School officials are confident that it will be as successful as merchandising has been. The major, which integrates courses in music with physics, communication, psychology, and a minor in electrical engineering, was designed by Ted Crager, associate dean, who spent six months visiting music studios throughout the country, and much of what he learned has been incorporated into the curriculum. Since the program requires courses in both music and engineering, a strong background in mathematics (high school trigonometry) and proficiency on an instrument (required by the music school) are prerequisites for admission. So far, about 25 students have been accepted into the program, which will be limited to 12 new majors a year.

"There's a lot of competition for and interest in this program," says Crager. "All of our students have a 3.0 or better grade average for entry. In addition, they have to demonstrate a strong aptitude for engineering, and a strong desire to stick through this rigorous program." Crager says that despite the extensive screening, he expects a fairly substantial drop-out rate; three students have already left. "We prefer that only the best survive," says Crager, "since our reputation will depend largely on the quality of student we produce in the next few years." The nascent program is already winning high marks. Crager says he has had inquiries from schools throughout the country. The program is the first at a four-year institution to be accredited by the NARAS Institute, the educational arm of the National Academy of Recording Arts and Sciences.

Like the merchandising program, engineering offers a senior internship, usually in a recording studio. "Although this is our first year," says Crager, "six studios have requested students for a

Learning experience:
Four major areas of study, including Music Merchandising with 55 majors (Alfred Reed, coordinator), Music Engineering Technology with 37 majors (Bill Porter, coordinator), Studio Music and Jazz with 120 majors (Whit Sidener, coordinator), and Music Therapy with 75 majors (Mel Arnold, Coordinator).

Admission to the School of Music is open to qualified musicians by audition. The total enrollment of the School is 725.

Other descriptions:
Descriptive format for each major program is available upon request from the coordinator.

Contact:
Program coordinator as listed above, School of Music, Box 248165, University of Miami, Coral Gables, Florida 33124, (305) 284-2433.

Helping the Young to Hear Music

Prospective junior high music teachers who sign up for Lawrence Eisman's senior year course at Queens College profit from his long experience teaching listening skills to 14-year-olds, largely because Eisman warns them what they're in for if they don't: a battle to keep their future classrooms alive amidst youthful cries that music is irrelevant.

Eisman offers Methods and Materials for the Teaching of Secondary School General Music to some 20 music majors a semester. Most of them, besides being performance oriented, are so absorbed in college-level theory and music history that they fail at first to appreciate the value of simply broadening the auditory horizons of young people who are much more likely to become music consumers than performers.

But Eisman knows his listening approach, for which he makes no claim of novelty, serves a genuine need. He knows how to elicit the interest of seventh and eighth grade general music students by sharing vocabulary, encouraging students' receptivity to out-of-class experiences, and offering them fail-safe musical challenges. The music teacher's task, as he sees it, is to increase every student's ability to perceive what is expressive in a piece of music—whether it's rock, jazz, or Beethoven—and he knows the disciplinary trouble that can result if it isn't done. His aim at Queens is to get the message across.

As an example of vocabulary sharing, Eisman points out how meaningless the bare terms *accelerando* and *crescendo* are for the average junior high class until a piece like "the Hall of the Mountain King" is played for them with its tension modulated by the quickening of tempo and a gradual increase in volume. Heard detail is likely to raise students' aesthetic sensitivity a notch, claims Eisman, and start selling them on the value of music.

Similarly, he says, teachers ought to understand that their pupils by and large don't know what a fugue is and initially couldn't care less. But they've all heard arguments at home or televised UN meetings, so when a recorded fugue is presented as a debate with a subject, interruptions, and a counter-subject, it all begins to make sense for them.

Most any piece of music, Eisman

semester. We hope those students will have the option of being hired by the firms for which they intern." The program is very career oriented. At the end of four years (there is no graduate program), a music engineering major will be trained for employment in a record studio, in film, in design work, as a sales engineer, or in sound reinforcement.

"When I was growing up in this business," says Porter, "audio-engineer positions were filled by young people who learned the business by hanging around, watching, sweeping the floor, moving instruments, and making coffee. Tomorrow's music engineers will be college graduates who will have studied English, history, physics, music, math, electronics, acoustics, psychology, and merchandising." Porter has what he calls an "industry background." In fact, he has engineered more than 7,000 recording sessions and still travels part of the year doing sound reinforcement for Elvis Presley's tours.

His heavy professional recording schedule, however, is one of the few complaints students have about the program. Actually, they are ambivalent: On one hand, they would like him around more; on the other, they're impressed by his professionalism. "Things slow down when Bill is away," says one student. "We know it helps the School's reputation when he travels, but we just don't have a lot to do during those absences."

In general, the students are obviously pleased with the School's practical orientation. "There may be places that offer better audio, music, or engineering courses," says Sally Dorgan, a 23-year-old junior and the only woman in the program, "but I know of no place that puts all of this together so well."

The program's facilities are first class. "There's nothing Mickey Mouse about our equipment," says Porter. "If we're going to train kids, we're going to teach them on the best equipment." There's nothing Mickey Mouse about the cost of such equipment either. There is a 16-track studio (there are fewer than a hundred of them in the country) that overlooks the performing auditorium. The equipment is ultramodern: The 24-track mixing control board is equipped with complete monitor mixing facilities for quadrophonic, stereophonic, and monophonic recording and playback. The complement of tape recorders includes the latest 16-track, 4-track, and 2-track machines, as well as quarter-track quad, stereo, and cassette machines. Porter and Crager estimate that the School has spent more than $150,000 for recording equipment alone.

Crager wants to increase the number of minority students and women in the program, but he believes that the advanced mathematics requirements tend to discourage women from applying. This may be due to attitudes rather than aptitudes. In any case, Crager reports that women have increasingly been expressing interest in the program.

If other programs are any indication, no one at the School will be permitted to remain self-satisfied for long. Dean Lee's style is one of constant reexamination. "Perhaps because we are relatively new, innovation has been easier," he says.

Do colleagues at other music schools view Miami's program as being overly commercial, as too business-oriented? "Only a few moldy figs at moss-covered institutions see us in that light," says Lee. "There's a lot of interest in what we're doing, and the students seem to love it here."

They do, indeed. On a perfect spring day, a jazz teacher and his students are sprawled on the floor with their instruments to create an ambience for an advanced improvisation course in Eastern music. Down the hall, members of the tuba ensemble arrive for rehearsal. "Tuba playing is a low blow," reads one enthusiast's bumper sticker. In the recording studio, some engineering students prepare to tape a rehearsal. A sign is posted behind Bill Porter's desk: "Life is now in session. Are you present?" At Miami's School of Music, the response seems to be: very much so. ■

feels, can be used to serve a comparable end. For instance, since children are almost invariably sensitive to the size and movement of bodies—their own, their parents', and their friends' —"Gnomus" from Moussorgsky's "Pictures at an Exhibition" can be played with students encouraged to perceive the relative stature and gait of the someone or something moving musically through it.

An intriguing Eisman technique is to let students make their own music by combining body sounds (finger snapping, hand clapping, and foot tapping) and environmental sounds (pots, pans, or junkyard shock-absorber springs). "Go away, tape something that will last 30 seconds, and we'll analyze it," he tells junior high pupils. If their response is perplexity, he adds, "I know you don't know what I mean. You're bound to make mistakes but let's see what happens anyway." It's a problem students can't fail to solve. Music is organized sound, and whatever they compose they'll have to organize to some degree. Eisman analyzes what the student composers accomplish and leads them to an interest in how other composers from Bach to the Beatles make their own music.

Queens music majors tend to shy away from performing this free-form exercise even more than junior high pupils do, Eisman reports. The student teachers' inhibitions, he feels, may be due to their nervous anticipation of a gang of kids going wild with toys in their own classrooms someday. But that rarely happens, he says—not if the teacher is uncompromising with regard to listening skill needs.

Eisman, who has been teaching at Queens for 13 years and taught secondary school general music for many years before that, is earnest about the need for aesthetic nourishment in many New York City classrooms. "People value what they themselves discover," he says. "The young today may be less patient than they were years ago, but the challenge is the same. We teachers just have to become increasingly alert to it."

For more information: Lawrence Eisman, Dept. of Music, Queens College, City University of New York, Flushing, NY 11367, (212) 520-7627 or 520-7340.

SOCIOLOGY

THE SOCIOLOGY OF TEACHING AND THE TEACHING OF SOCIOLOGY

by Lawrence J. Rhoades and Hans O. Mauksch

One of the perplexing problems confronting any attempt to improve undergraduate teaching is the absence within academic disciplines of collegial communities based primarily on teaching. Though such communities abound among researchers and scholars, teaching appears to be largely an individual enterprise rather than a collective one. The explanation for that seems to be in the social organization of academic disciplines, where the paramount value is the production of knowledge for consumption by the disciplines' own members. This value has been institutionalized in the authority, status, and ranking systems of these professions. Consequently, disseminating knowledge to laymen becomes merely a byproduct of the more fundamental process in which academic disciplines are engaged, and this situation has important ramifications for undergraduate education. Although laymen frequently assert that academicians live in ivory towers, professors are realistic enough to recognize the career implications of the academic value system. Career mobility depends not on teaching excellence but on research and publication, for only these can be converted into a visible professional reputation.

Informal and formal communication channels among teachers, however, are notable by their absence; teachers are isolated, largely invisible. This lack of significant external reward and collegial interaction means the teaching effort must be based on intrinsic rewards. Unfortunately, teachers find it difficult to maintain their motivation because of the negative feedback they receive from colleagues and students. Colleagues complain because teaching is not seen as directly supporting highly valued activities, and they point out that "one should not break his back to become a second-class citizen." Students are disgruntled because teachers, lacking the necessary skills, are frequently inept in the classroom; teaching skills are not formally acquired because they are regarded as natural endowments rather than learned capacities. In addition, working conditions faced by most teachers are so far from the idealized professional atmosphere and student relationships they have experienced in their graduate training that they become disillusioned.

Several years ago, the Council of the American Sociological Association (ASA) recognized this situation and its own responsibility to stimulate and improve instruction in sociology. As a result, the Council encouraged the development of a Section on Undergraduate Education as a first step toward increasing the recognition of teaching as an intellectually stimulating, professionally worthy, and constitutionally required activity of the Association. In addition, the Council later provided financial resources for a workshop aimed at creating a proposal to improve undergraduate instruction. Developed and submitted by the Section, the proposal was financed by the Fund for the Improvement of Postsecondary Education in September 1974. The ASA Project on Teaching Undergraduate Sociology has been a going enterprise ever since.

The Project has taken on the characteristics of a social movement rather than a large-scale research effort—a movement to develop within sociology a collegial community based primarily on teaching. In spearheading this movement, the Project has found it fruitful to view teachers as a minority group, in that minority groups are frequently assumed to be engaged in activities less worthy than those identified with the dominant strata, and to be biologically endowed with talents; while dominant groups are seen as

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masters of learned and acquired skills and knowledge.

One cannot help but compare researchers who see their skills as acquired and in need of constant upkeep with teachers who are seen as either born with talent or, if unendowed, not considered subject to study and learning. In addition, recent history has taught us that minority groups need to acquire a sense of worth and militant assertiveness in order to claim what is theirs from dominant segments of the culture. Thus the Project has sought to (1) organize an extensive network of interaction among sociologists committed to teaching; (2) develop institutionalized communication channels for teaching-related information; (3) assist, support, and recognize teachers of sociology; and (4) promote the development, production, and distribution of teaching materials.

The foundation for the network is in the membership of the Project itself, which includes more than 100 sociologists nationwide who represent the three environments in which sociology is taught: two-year colleges, four-year colleges, and universities. The network has been further extended through a Project newsletter received by more than 1,700 sociologists; a teaching column in *Footnotes*, the newspaper sent to the 14,000 ASA members; and special issues plus a regular column in *Teaching Sociology*, a commercially published journal. In addition, there is vigorous and broad participation in professional meetings at the state, regional, and national levels.

The Project recognizes three major fields of concern in undergraduate teaching: curriculum, teacher development, and institutional support for sociology programs. Task groups and subgroups have been exploring these areas for the last two years. The findings are now being used in the development, production, and distribution of teaching materials.

Early recognition of these efforts by the Lilly Endowment provided the Project with additional resources to pursue its teacher development mission and to begin institutionalizing its products, activities, and programs into the social organization of the discipline. Under the guidance of Charles Goldsmid of Oberlin College, these resources are being used for preservice and inservice teacher development workshops; for the establishment of a network of teaching resource specialists that will assist interested departments in improving their programs; and for the creation of a teaching resource facility in the executive office of the ASA to carry on the work of its programs.

A recent development has made the formation of a collegial community based on teaching even more relevant for sociologists. Many professions, ranging from education, nursing, and engineering to law, social work, and medicine, have recognized that sociology, which represents the study of the broadest range of social institutions and arrangements, may contribute directly to the training and socialization of their own future members. This represents a challenge to sociologists in that it combines the traditional exploration of the discipline itself with relevance to identifiable social segments, concerns, and problems.

Finally, the teaching of sociology, like that of any discipline, involves the identification of special problems that the discipline must face to be effective as a teaching medium. The teacher of sociology is confronted with the challenge of helping the student discover that daily personal experiences and social observations, albeit familiar, can be understood in different and scientifically systematic ways by applying sociological concepts and methodology. In doing this, the sociology teacher must function in a culture that tends to encourage thinking in terms of either single individuals or large world systems. The structures and processes with which sociologists approach the wide range of social institutions—family, community, work, recreation—are not part of the commonsense tradition of this culture. The teacher of undergraduate sociology is frequently at an opposite pole from that of some colleagues in other fields. While many teachers in the natural sciences introduce new subject matter to students, the teacher of sociology frequently must assist the student to achieve greater distance from phenomena too familiar, to attain the perspective of objective knowledge.

This section of the fourth *Change* Report on Teaching and the supplementary booklet detail some of the noteworthy attempts sociologists are making to communicate the excitement and practical value of the sociological approach to society and its existential problems. This adds to the formation of a collegial community, for it contributes to the interaction, the visibility, and the integration of teachers within the discipline, thereby providing a basis for the professional platform needed to bring excellence to the discipline, the teaching institution, and above all to the student. (Further information about the ASA Project on Teaching Undergraduate Sociology can be obtained by writing Hans O. Mauksch, Project Director, ASA Project on Teaching Undergraduate Sociology, 1722 N Street, N.W., Washington, D.C. 20036.) □

For those interested in a broader view of improvements in undergraduate sociology teaching, a supplementary booklet, *Approaches to Undergraduate Teaching in Sociology*, is available. It contains over 30 additional learning experiences that were submitted to the American Sociological Association. Included is a brief abstract of each course and the name, institution, and phone number of the person to contact for further information. For copies write: Teaching Project, *Change* Magazine, NBW Tower, New Rochelle, New York 10801.

MORE THAN TECHNIQUES: A RESEARCH CENTER WITH HEART AND SOUL

by James Benet

The Social Systems Research Center at California State College, Dominguez Hills, is described officially as "a training laboratory within the department of sociology." It occupies a big, informally arranged classroom in the social and behavioral sciences building, where it offers a number of undergraduate and graduate courses for regular credit. But the Center does much more for its students than offer academic courses. Its other dimension was vividly described by Robert De Guevara, a telephone company communications consultant who discovered the Center while advising the College on phone use. He is now a graduate student.

"I had it in the back of my mind to come back for a master's degree," De Guevara said. "Finding the Center and the help it gives people convinced me it could help me reach my goal or any goal in the field of education. One of the magnets is that the people here believe education is important, a means to success. And the group is attractive—multiethnic, many ages. The whole thing revolves around needs, with camaraderie and the excitement people thrive on. You can always find a willing ear."

It is striking that De Guevara's account does not mention sociology at all. However, in its way his description is quite as valid as the official one. Jeanne Curran, one of the founders, says that the original function of the Center was to do sociological research but more than that to develop a climate for learning that would produce a shared community with "peak thought experiences" involving the excitement and pain of learning. If the phrasing is unusual for a sociologist, that is because Curran is an unusual sociologist. Her undergraduate degree is in physics, she continued with graduate study in French, and finally earned her doctorate in education. Concepts and phrases from all her fields tumble together in her conversation as she races through appointments, meetings, writing sessions, and other work.

In its earliest conception, Curran says frankly, the Center was simply a means for keeping together a small group of women who had worked successfully to bring about the establishment of a child care center on the campus. In the course of that effort, they had done a survey of campus needs as perceived by the students—the maiden project of what became the Center. Why not, they asked themselves, do more research together? And why not even self-sustaining research for off-campus clients? And so the Center began with an instructor and two undergraduate students.

From the start the research was conducted by students with Curran acting only as advisor. Herman Loether, a member of the department who was on leave at the time, consulted and lent enthusiastic support in this embryonic stage, and between Curran and Loether a comfortably shared responsibility grew for the Center's activities. Quiet and laconic, a traditionally trained sociologist whose specialty is statistics, Loether has an approach that nicely balances Curran's.

The sociology department, which has a unique history of support for new approaches to community and student needs, agreed to give credit for the work on a trial-run basis, and the Center quickly solicited and obtained projects. One was an assessment of employment needs for the neighboring city of Comp-

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ON STARTING A RESEARCH CENTER

First, you find a warm department
with a few crazy professors
who want their students to eat
after graduation

Then, you send the professors out
to listen intently to the problems
oh! the problems, of the local research people

Then you ponder, sometimes briefly
sometimes for many weeks
but with patience and true belief

You find a project, small but exciting
that you and your students could hope to pull off
for very little money
There's never enough money
but a good project
that will help the local people
and give your students something real to do

Then you launch your study
with caution, and some structure
and departmental blessings
(though you never dare whisper
a word to the ADMINISTRATION)
highly suspect, starting from nothing, you know

Then you discover your office overrun
by enthusiastic students you thought were apathetic
who bring their friends from every nook and cranny
'til you all spill over into the hall

And then, you admit, chaos reigns
There's no end to the explosion
of student igniting student
soon
soon, now
the ADMINISTRATION is bound to notice us

So you summon your quixotic courage
and print grand announcements
for the opening
of your new Research Center
for how else can you explain
all those students in the halls?

Center, what Center, harrumphs the president
I've never seen a proposal for a Center
who are all these students
why don't they go home
such an apathetic lot they are, you know

Then as you smile obsequiously,
you assure the ADMINISTRATION
that it just happened
this way
grew out of your classes
like Topsy, true,
and quite surprised you, too

Now that you're a Center
tried and true
you drive your poor hooked students
on to ever greater heights
reports you print, with long staff lists
papers they present, at the most honored societies

Then, with students trained
poor committed dears
to run the daily business
you search like mad for funding
so your students can eat
while they're still in school
if they can find the time to

Then you wait
in the flurry of everyday production

Sometimes funding will come right away
Sometimes not at all

Sometimes you will have to wait
and suffer many cruel delays
when a Senator who doesn't know you exist
writes out $3 million from an agency
who wanted to help
or County Counsel makes a demand
that can't be met
or you're too tired to make another deadline

But wait,
wait patiently

For if your Center has the love
and the warmth
and the humor it needs to work
it will survive these times

And then funding will come
and students will work
and eat, if they can find the time to
and learn with new excitement

And the president will say
Harrumph, you really must come and visit our Center
a remarkable venture, you know
started on student and faculty initiative
one of our finest programs
we've always given it our greatest support

And then you'll smile
a strange quixotic smile
and go off to find another warm department
with a few crazy professors
who want to see their students eat
after graduation.

— The Social Systems Research Center
California State College
Dominguez Hills

ton. Another, supported by a grant from the Women's Equity Action League, surveyed employment conditions for women in the Los Angeles area. But not all projects have had outside financial support. In the spring of 1973, the sociology department agreed to formal establishment of the Center.

Faculty and students have fashioned the Center's policies as they go along. Today each research project is carried out by a student director and student staff working with a client—along the lines of the think tanks that have sprung up across the country in the past few decades. Two of the most experienced students—right now, Barbara Moore and Maxine Boyd—serve as overall directors of the Center. Faculty are listed only as advisors on the research projects. They are still the teachers of the

Students at work in the Social Systems Research Center.

courses for academic credit that the Center offers (Workshop in Social Research, Graduate Workshop in Research and Theory, Action Research in Institutional Settings, to name some), but on the research projects it's the student directors who sign the final reports.

The Center is still evolving. After several years it became clear to faculty and student leaders alike that some way had to be found to quickly teach new students the principles of collecting, coding, and analyzing data. Four of the student directors set up workshop sessions, generally taught by experienced students but in some cases by faculty. This year, for the first time, these were incorporated as a requirement for new students in the workshop courses. Required sessions represent a modification of a basic Center principle that it's good to experience the pain of creation but "nobody should lay it on you. It's a Zen saying that everyone should choose his pain."

The structure of student progress is unusual but clear cut. By signing a bulletin board list, students join an available research project. Those capable of becoming project directors are informally identified by their good work and formally rewarded by a letter of recommendation from the student directors. Curran says, "We know people are close to being promoted to director when they never have time to comb their hair."

Directors take on teaching responsibilities under faculty supervision and lead a research project, posting working hours and maintaining a project workflow chart. Ultimately, the director prepares a paper suitable for professional publication and presents it at a professional meeting. So quickly did the students push past faculty expectations in writing their professional papers that now the department of this small, 7,000-student college is one of the principal contributors to the annual professional meeting of the Pacific Sociological Association. (The professors do not appear as coauthors.)

In addition to its academic function, the Center strongly cultivates psychological understanding, leaning on "rap sessions" to talk out personnel problems. Posters decorating the Center's walls are inspirational rather than merely amusing or wittily rebellious: A picture of a rowboat carries the legend, "If there's no wind, row!"

Given its supportive attitudes, it's no wonder that the Center works as a comfortable and informal mechanism to socialize and instruct, taking the place of clubs, social groups, eating places, and such. Like many newer schools that largely serve commuting students, Dominguez Hills, only 12 years old, has few of these amenities. Only a large cafeteria acts as a meeting place.

But the Social Systems Research Center has coffeepots, a refrigerator with food to be shared, and couches as well as straight-backed chairs. Here students exchange ideas on their formal courses as well as their work for the Center. "It

Sociology Through Social Action

Community organizer Saul Alinsky has pointed out emphatically that a social movement without organization cannot hope to be effective. At the University of New Orleans three years ago, Daniel J. Abbott and James M. Calonico took note of their students' churning social reform energies and decided Alinsky's pragmatic views were apt. They began Social Problems and Social Change, a field-course alternative to their regular lecture class on city problems. Its aim: to move concerned but frustrated students out of the classroom and into work with New Orleans pressure groups.

The learning-through-action course, initially an experiment, has proven its worth. The approximately 30 students who enroll each semester regard it as a valuable educational experience, even if early dreams of effecting quick reforms are seldom realized. Course requirements are modest but stimulating. At the outset, students enter a social arena of their choice: housing, health and welfare, ecology, the criminal justice system, and the local school system are examples. They then divide into work teams and contact appropriate social agencies. If a team has trouble finding its way (most now do not), it is given leads. It is also informed of complaints under investigation.

Early on, for instance, Abbott and Calonico pointed out the Tenants' Union, the New Orleans Legal Assistance Corporation, and Treme Community Improvement as agencies pursuing public-housing issues; under scrutiny at the time was the tendency of grocers to raise prices in the low-income area called Treme when welfare checks were mailed out. Elsewhere, environmental clubs were opposing construction of the Taft nuclear reactor, a women's group was questioning a parish-wide school policy forbidding unmarried pregnant girls to attend class, and Community Action for Corrections had several prison-reform projects under way. These and many other agencies were agreeable to student membership.

Dramatic achievements in change

helps me," said one, "because I can understand Tom [a student] on statistics better than I can Herman [the professor]." And the faculty join in easily. "Faculty and students playing together is common enough in graduate school," says Curran. "We are moving it down to the undergraduate level." A big bookcase is stocked with a miscellaneous collection of sociology works. Some disappear, naturally, but Moore and Boyd would rather have that happen than try to keep things locked up. In general the somewhat disheveled, cheerful, busy quality smacks more of the college newspaper or student government office than of a formal academic enterprise.

Perhaps the most impressive project to date is a report evaluating a pilot program in the reform of juvenile justice in Los Angeles county, under the sponsorship of one of the county supervisors. The student evaluators monitored operations in sheriffs' substations, police stations, and at other sites, and their findings led to changes in the pilot program as it proceeded.

The study conformed to another of the Center's original principles—to participate in community life by doing useful work. To this end, it has also carried out several studies for the College administration, a far cry from the early days when the Center and the administration were at odds over child care.

Center leaders believe that their work offers the College a solution to a difficult job: reconciling professional academic standards with demands for vocational preparation. The Center's way, they say, is better than establishing job-skill courses. "A lot of people are going to go into public administration, even though they may not know it yet," says Curran. "Social science will be increasingly important in that area. And there will also be job opportunities for social scientists in business." What better introduction to job opportunities than to work on a research project for a government office or a private company?

The most recent innovations are the undergraduate and graduate "Certificates in Social Research," attesting the holders to be competent to carry out all phases of research projects and, in the case of the graduate certificate, to supervise other researchers. To earn these the students must satisfactorily complete a stiff series of courses, including a year's participation in the work of the Center, as well as traditional courses in such

> *"If we throw you a hot potato and you drop it, you're a staff member; if we throw you a hot potato and you hold onto it, you're promoted to assistant project director; if we throw you a hot potato and you throw it to someone else, you're project director. When you start throwing us hot potatoes, then you become the director of the whole Center.*

are not expected; indeed, university students cannot be required to enter battle, only to observe it. Most choose to get involved, however. The two instructors, alert to the bureaucratic pitfalls of any organization, keep their own course's paper-and-pencil work to a minimum. A team's brief statement of its goal (from locating literature and exploring broad issues to getting a law changed) can be revised at any time in the first three weeks of the semester as the team gets its feet wet.

Teams meet every three weeks with an instructor; each member submits a one- or two-page report on his progress. (Sample questions addressed: What action did you take? What success/resistance did you meet?) The class regroups periodically to exchange experiences. Students may decide to stay with a social-action cause after the semester ends or they may be disinclined to; at the very least, they leave a legacy. The final report, an evaluation of the semester's experience, asks for recommendations of future action that might be taken, for example, by a new work team in the upcoming semester.

The course was funded by a Ford Foundation Venture grant. One measure of its success is Abbott and Calonico's own growth. At first they found students almost totally dependent on their leadership and requested more funds for graduate assistants. But feedback from students has nurtured interdependence; they've learned enough to meet the challenge themselves. The request for more money was dropped.

Is Social Problems and Social Change helping to bring about change in New Orleans? It's difficult to assess student contributions in a given semester, says Abbott; a follow-up program for graduates would be desirable. As it is, students learn how to organize by organizing themselves (the final report, for grade, is a team effort); they deepen their awareness of both issues and the social-change process, and they also —perhaps—learn about patience from the sobering lessons of disenchantment. The fight to halt the reactor was lost; it is now under construction. The Tenants' Union was defeated in a public-housing issue. The plight of the pregnant schoolgirls remains unchanged. Students tend to drop lost causes and take up new ones as the semesters pass.

But one goal was dramatically reached in a single semester. When a team wanted to view prison facilities for mental patients, officials continually denied the request. After other means had failed the team finally got local TV exposure for its cause and officials relented. Another goal is steadfastly pursued by every class: An early team helped form a campus chapter of the National Organization for the Reform of Marijuana Laws. The state legislature has not let a proposed decriminalization law out of committee, but at the University of New Orleans this particular battle has never been unjoined.

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subjects as sociological theories, statistics, and multivariate analysis.

To many students at Dominguez Hills, the link between the Center and the working world has proved powerfully attractive. These are older students—their average age is 28, and 13 percent are over 40. They are diverse both ethnically and socioeconomically. Dominguez Hills, about 15 miles south of the center of Los Angeles, lies between Compton, a nearly all-black community, and the expensive suburbs of the Palos Verdes peninsula. When asked their reasons for attending college, most students plainly indicated their motives were economic.

Although the Center was looked on with suspicion at first by some faculty and administrators, it has established itself firmly in a remarkably short time. With the backing of her department, Curran was given early promotion to associate professor and tenure. The College president, Donald Gerth, says that in his opinion the Center "is one of the big winners on the campus. I read a paper by a couple of their students that is absolutely first-class work."

Gerth, whose field is public administration, adds that some of the most interesting activity in public administration at the College is done in the Social Systems Research Center. "It bothers some administrators that their organizational chart doesn't show the same boxes as other units, and that they don't have the same way of spending money," he says, "but that's not a real problem."

Sociology department chairman Bob Christie is equally approving. "Students today don't want to sit in class; they want to do what they are talking about, and this is where they can do it," he says. "Education is supposed to prepare people to deal in their own best interests and society's. The Center is a small society right here, and people are socialized and integrated into it. Lots of governmental things are demystified for them."

Whether the Center depends heavily on Curran's personal dynamism and her psychological talents is hard to tell. She and her closest collaborators regard working all night as merely a test of personal commitment and think it a little surprising that fellow teachers keep more conventional hours. And her quick insights readily solve personnel problems that many supervisors might find trying and long lasting.

Christie thinks, however, that the Center could be replicated by anyone who grasps the idea and has adequate energy. It could be done with any social science department, he believes, pointing out that the structure could easily be adapted to projects in oral or local history by a history department. Currently a pilot program is under way at another small college in the huge California State University and Colleges system—Cal State, San Bernardino. And Cal State, Stanislaus, expects to launch its own trial center this fall.

No formal evaluation of the Center has been made up to now; perhaps its life has been too short. Its warmest supporters concede that it has some defects. "We've had some casualties among students who didn't demand enough," Curran admits. "If we were perfect we would have gotten to them. But I think that the worst they suffered was disappointment."

Some critics are cautious about accepting student enthusiasm as a criterion, noting that sociology is currently a popular subject in many places. At Dominguez Hills the department that had six members in 1970 expanded to 17 members in three years and is holding steady. Enthusiasm for the Center, such critics feel, is merely one expression of a temporary student trend.

A cautious view also came from one of the teachers, Alan Ryave, who began working in the Center in 1976-77. "It's attractive to me, and I've taught only in the conventional classroom setting up to now," he says. "It really is student run, and they won't let me come in and take over. But it can't do everything; there are some sorts of sociological work, especially the lonely kind that is one person at a typewriter, that aren't done here. So I don't say it is better or worse."

The reports of the research projects offer another opportunity for outside evaluation. Generally they seem to reflect a very high level for student work, particularly in the careful attention to obtaining random samples in the study design. But conclusions aren't always persuasive. For instance, to say, as one report does, that "Income is most often accepted by others as the measure of occupational status" ignores the evidence that societies establish cultural hierarchies of occupations that are not wholly defined by income. To many, a professor of sociology enjoys higher status than a truck driver who may make more money. Other conclusions might be classed as idle speculation, since they are not borne out by the research. Nevertheless, in general the studies have met the test of usefulness to those who commissioned them; Los Angeles county supervisor Peter Schabarum praised the evaluation of the Norwalk juvenile justice project as "a major accomplishment." That record must be viewed as a solid success.

Ultimately the careers of the students at the Center will also reflect on the Center's value, but it is still too early to assess them. The two students who might be regarded as cofounders of the Center are doing well; one is a PhD candidate at the University of California at Los Angeles, and the other is employed by a large research center. But their experience in the Center, during the excitement of its creation, was doubtless quite different from that of later students.

On the whole, evaluation must rest largely on the subjective impressions of the people involved with the project, and they are overwhelmingly favorable. One student summed up his feeling by saying, "If you really put your heart and soul into it, this is more of an education than just learning some techniques." ■

Learning experience:
Workshop in Research Methods, Action Research in Institutional Settings, and Graduate Workshop in Research and Theory.

Other descriptions:
Descriptive materials are available on request from Jeanne Curran or Herman Loether. The following books and articles were helpful in developing the approach:

Warren G. Bennis and H.A. Shepard, "A Theory of Group Development," *Human Relations*, September 1956, pp. 415-437.

Benjamin S. Bloom, *Taxonomy of Educational Objectives: Handbook II: Affective Domain*. New York: David McKay Co., 1969.

Jerome T. Bruner, *Toward a Theory of Instruction*. New York: Norton, 1966.

Jerome T. Bruner, *On Knowing: Essays for the Left Hand*. New York: Norton, 1971.

James Coleman, *The Adolescent Society*. New York: The Free Press, 1961.

Similar programs:
California State Colleges at San Bernardino and Stanislaus.

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INTRODUCTORY SOCIOLOGY: ANY NUMBER CAN PLAY

by Jean Dickinson

Less adventurous professors would dismiss the format as chaotic. Yet Richard Dukes, assistant professor of sociology at the University of Colorado at Colorado Springs, appears to thrive on the excitement, the noise—even the initial bewilderment of students in the midst of a simulation game. "I'm comfortable with chaos," he explains. "I like a classroom with a high noise level and lots of activity."

On a Monday morning in early March, 70 students in his introductory course, Sociology 111, begin a four-week unit on social organization by playing In the Tube: The Social Organization of Surfing. Designed by Dukes, the game simulates the ultimate experience in surfing: "shooting the tube" or taking off on an almost perfect wave at speeds up to 25 m.p.h. By maneuvering tiny surfboards across plastic waves, students (in groups of six) learn the rituals of an unfamiliar sport. The goal is to accumulate as many points as possible during a simulated day of surfing and to avoid conflict with the other surfers. Arbitrarily assigned roles (outstanding rider, outstanding paddler, or average rider/average paddler), students soon discover how their roles, combined with wave quality and the number of surfers ahead of them on the wave, affect their accumulation of points.

"Contrary to popular belief, surfing is a conflict-ridden sport—quite unlike the idyllic pictures you see in magazines," says Dukes, who surfed for more than 10 years in southern California before moving to Colorado. The game, he tells them, will illustrate how the social environment of surfing influences the behavior and attitudes of surfers.

Although students appear confused at the outset, Dukes's enthusiasm quells skepticism and nervous laughter: "The best way to learn the game is simply to begin playing. In 20 minutes you won't be having any problems." Midway into the 75-minute session, he interrupts play to define four aspects of social organization—norms, roles, social hierarchies, and social control—using examples from the game and personal anecdotes.

"Everyone would guess that surfing is an unorganized sport. Yet all of social life is organized; and as sociologists, you're going to start recognizing and identifying that organization." The four concepts, he adds, will resurface during other activities planned for the unit: reading *One Flew Over the Cuckoo's Nest* by Ken Kesey; viewing Frederick Wiseman's stark film *Titicut Follies*; taking a field trip to a nearby Hewlett-Packard plant; doing a research exercise in observing and recording organized social interaction; and participating in informal lectures on comparative views of social organization. "I like simulation games because they question traditional social structures," Dukes tells me later. "I don't want students to over-intellectualize their roles or turn them into academic exercises, so I wait until the actual day of the game to explain the rules."

Since arriving at Colorado Springs in 1973, Dukes has taught introductory sociology to more than 400 undergraduates. It is a campus particularly suited to his innovative style of teaching. Undergraduate education is much discussed among faculty and administrators. When faculty members ranked their goals on a five-point scale in a recent survey, teaching headed the list with 4.8. A major objective, adopted in 1971, is "...to bring together in the same classroom younger and older students, cutting across age, social, and racial barriers to facilitate improved understanding of one another and to foster a constructive view of societal goals." Moreover, it is a relatively new campus, only recently granted independence from its parent institution, the University of Colorado at Boulder. "We're still growing, having been accredited only since 1972, and there's ample opportunity for trial and error—especially trial," says Vice Chancellor Jack Sherman, who praises Dukes as "highly regarded, innovative, and demanding of himself and his students."

Devoid of such frills as dormitories, athletic programs, and fraternities and sororities, the University harbors a small student population (some 3,700 are enrolled for one or more classes). "Our students are mature adults [average age 28] and the majority are also holding down jobs," explains Sherman. "They expect high quality teaching."

Dukes has been involved for some time in efforts to improve undergraduate education in sociology. As a graduate student at the University of Southern California in 1971, he joined forces with Sarane Boocock and H. Edward Ransford to develop an innovative introductory course that would "teach students to think clearly, give students a working knowledge of the concepts used by sociologists, and involve students in doing the kinds of things which are done by sociologists."

Using a modular format (introduction/concepts, socialization, social organization, deviance, stratification, ethnic groups, and social movement), Dukes taught the course with Boocock and Ransford to between 100 and 120 students per semester. Each module contained lectures, readings, a simulation game, films, and a research exercise.

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The idea was to circumvent an important shortcoming of the lecture/textbook syndrome: "A major problem with even the best traditional courses seems to be that students never *do* any sociology."

Clearly, Sociology 111 owes its format to those earlier years at USC. Dukes, however, has pared the content to four modules: socialization, social organization, stratification, and deviance. An outspoken critic of the "cram-regurgitate-forget" approach to learning, he says, "I tried the traditional method of lectures and examinations, but it just didn't work for me. I'm uncomfortable making my students take multiple-choice tests because such tests don't build writing skills. I'm uncomfortable hiding behind a podium with a set of lecture notes because I don't want students sitting passively."

Dukes also faults the standard survey course for being a neglected offering in many departments. "The best teachers—the ones most excited about sociology—should be teaching the introductory course. Not only is it the student's first exposure to the subject matter, it's an opportunity to attract the best students into the major." Dukes's course meets for one 75-minute period and one 125-minute period each week. Underpinnings of the traditional introductory course are absent: no textbook, no midterm or final examination, no course syllabus, no discussion sections led by teaching assistants.

Four books are required reading for the course: *Two Worlds of Childhood* by Urie Bronfenbrenner, *One Flew Over the Cuckoo's Nest* by Ken Kesey, *Inequality in American Society* by Leonard Reissman, and *Society of Captives* by Gresham Sykes. "I want students to digest books as wholes, an impossible task with the standard textbook." To improve reading skills, he supplies students with an outline of the main points and suggests they read each book in only one or two sittings to "get the broader brush strokes."

In place of examinations, students write a five-page paper at the end of each module. In the first assigned paper this spring, for example, they compared three aspects of socialization in the Soviet Union and the United States (or a country of their choice): goals (e.g., obedience, altruism, self-discipline); agents (e.g., parents, mass media, peer group); and techniques (e.g., cooperative toys, withdrawal of love, cross-age modeling). At the end of the social organization module, students are asked to apply four sociological concepts—norms, roles, social hierarchies, and social control—to In the Tube, *One Flew Over the Cuckoo's Nest*, or the field trip to Hewlett-Packard. "I want students to draw upon knowledge gained from preceding elements of the module and to integrate those elements in a meaningful way," says Dukes. Grades in the course (which tend to be high) are based on an average of the four paper grades.

Simulations for the course include:

- Intentional Community by Harriet Tamminga, which simulates the development of a utopian community in the southern Colorado Rockies and calls for collective policy decisions on such issues as allocation of resources, work distribution, the pattern of sexual relationships, and education. Also, players must work toward "self-actualization."
- Starpower, a Weberian version of R. Gary Shirts's game by Dukes, in which a low mobility, three-tiered society is built through the distribution of wealth in the form of chips. Those players who acquire the most wealth become members of the upper class and are allowed to change the rules of the game. Starpower, according to Dukes, models the most central features of authority structures such as social classes, resources, exchange, status/mobility, and authority.
- Caged, by Dukes, simulating the social structure of prison life with players assigned to argot roles modeled after those observed by Gresham Sykes in his study of the New Jersey State Maximum Security Prison. The purpose of the game is to provide students with an understanding of how social structural arrangements predict behavior. Class attendance is not compulsory and students are never graded on their performance in games.

Students must also complete a small number of varied research exercises. During the socialization module, students round up some 35 children under 10 and interview them on their daily activities: What is their favorite thing to do? With whom do they like to do it? Would they rather watch television or be with daddy, with mommy? The purpose of this exercise is to gain insight into the socialization of U.S. children. An-

Sharing the Fruits of Undergraduate Research

Traditionally, sociology/anthropology research is left to graduate schools; undergraduates get little chance to show what they can do. At the University of Santa Clara, Joseph DeMartini felt this left untapped a wealth of interest and talent, some of which he could see in his own students. Now the small California liberal arts school hosts an annual one-day research conference open to undergraduates from seven western states. Its purpose: to stimulate original research at the undergraduate level by providing the same sort of share-the-results rewards professionals get.

The conference, which meets every April, was founded by DeMartini in 1974. (He has since moved on to the University of California at Santa Barbara. Nancy Olson is now director.) It had a precedent in psychology at Santa Clara, but it broke new ground in the country for sociology and anthropology and has uncovered surprisingly advanced work.

DeMartini received help at the outset from the Pacific Sociological Association, which agreed to include an announcement and a call for papers in its regular December mailing. This spread the word to faculties in the three coastal states plus Nevada, Arizona, Idaho, and Hawaii. (DeMartini thought it best to keep the conference mostly regional so that invited students could afford the fare.) The response was enthusiastic. Outside faculty members, many of whom offered to chair the conference sessions, encouraged their students to submit work and have done so increasingly every year.

Papers are due in mid-February for review by a Santa Clara faculty committee. Either empirical or theoretical work is acceptable. A Bakersfield student, for example, studied local belly dancers from an anthropological perspective and reported on their cohesion and group solidarity; a Berkeley undergraduate presented an integrated theory of emotion. The re-

other exercise calls for students to pair off and observe a repeated social interaction between two persons at a public place such as a ticket window or a retail sales counter. They must take notes on the norms governing the situation, the roles of the participants, and any evidence of social control and social hierarchies.

A major difficulty with the modular format, according to Dukes, is the "fit" problem. "The real trick is to organize all those diverse elements into a coherent whole. I'm always trying new things and weeding out those that don't work." Is learning improved through the use of such diverse teaching strategies? "Adequately measuring both cognitive and affective learning is an extremely difficult task," says Dukes. "If I don't believe in the multiple-choice approach for grading purposes—and the multiple-choice method is about the only widely accepted way to quantify learning—how can I make it the standard evaluation tool for my course?"

In the absence of such formal data, however, there are other ways to establish with reasonable certainty that his students learn basic sociological concepts. For instance, they seem to do well in subsequent upper division sociology courses. Department Chairman Robert Hughes, whose specialties are criminology and social theory, says, "Rick's course generates a lot of student participation while still getting across the substantive issues of sociology. When his students enter my classes they know the material."

Learning experience:
Introductory Sociology: a course composed of modules, each of which contains a set of readings, lectures, research exercises, a gamed simulation, and a short written assignment, the goal of which is to further integrate the elements of each module. No prerequisite. Enrollment: 50-100.

Other descriptions:
"Teaching Introductory Sociology: The Modular Approach," *Teaching Sociology* 2, April 1976, pp. 165-176.

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Since it is a departmental practice to offer students a choice of instructors for every required course in the major, Dukes has a counterpart in Sociology 111, Jay Coakley, reportedly a superb teacher who has honed the standard lecture/textbook format to a fine art. "Our goals are the same, although very little that I do could be classified as innovative," says Coakley, who also teaches a course on the sociology of sports and leisure. "The lecture method happens to work well for me. I've used simulation games in several situations, but it's hard for me to organize games in a large class and see that everyone is involved in a meaningful way. Rick does get students involved because he's enthusiastic and really believes in the games as effective teaching devices. When his students emerge from the course, they're well prepared."

Students' feelings about Dukes's teaching method can be estimated from responses to the standard University of

view committee looks for freshness in topics and research methods backed up by ample reading and solid data. Other points considered: Is the study modest, aware of its contributions and shortcomings? Is it written clearly? Is it work worth sharing with colleagues? Of the 50 or so papers submitted each year, the committee selects 36 that best meet moderate criteria and the authors are notified by late March.

Ten ninety-minute sessions are held on the last Saturday in April; sociology and anthropology groups meet concurrently in adjoining classrooms. The sessions are broadly labeled (in sociology, for example, Public Policy Issues, Sex Roles; in anthropology, Work Settings in Sub-Cultures, Archaeology as Physical Anthropology) and are chaired mostly by visiting professors so that students get a diversity of formal critiques and informal discussion leadership.

The four or so papers brought to each session reflect a lively variety of interests. Undergraduates have researched campus attitudes on childbearing, the role and status of public defenders in five California counties, and the spirit world of the Zambales Negritos. From two-year institutions have come papers on Punjabi weddings, Kwakiutl potlatches (ceremonial feasts), and the Indian use of obsidian.

DeMartini sees research as the zenith of the teaching/learning process, in that it measures the degree of one's mastery of a discipline and also analyzes an aspect of the real world. But sharing its results, he feels, is equally valuable, since new knowledge is thus integrated into the discipline and further inquiries can be started. Nourishing inquiring minds is the conference's sole aim, but there have been unexpected additional rewards:

- Surprised chairpersons have found some work that meets professional standards. Five students at the 1975 sessions, for example, were encouraged to revise their papers for submission to the *Humboldt Journal of Social Relations*. One, "Kibbutzim: A Study of One Socialist Alternative for Women," was published.
- Undecided students have been swayed by peer reinforcement to go on to graduate school.
- Notre Dame and Providence College took cues from Santa Clara and began their own sociology/anthropology conferences, encouraging undergraduate research on the east coast.

Perhaps the most moving testament to the esteem in which the Santa Clara conference is now held concerns an Idaho State student. He was invited last year to present his paper on alcoholism but could not afford transportation to California. His teachers took up a collection and sent him.

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In the Tube and Intentional Community are two of the simulation games used by Dukes. Students playing In the Tube discuss the social organization that emerges among surfers.

Colorado evaluation form that asks them to rate the course on 27 items. Innovative courses characteristically do less well on standard evaluations, according to Dukes, because the questions are designed for evaluating more traditional formats. Yet his course consistently rates one to two points higher on each item when compared with the average scores for all other University of Colorado courses.

Certainly the students I talked with seemed to find the course stimulating and worthwhile. Fran Mauch, 34, who is studying for a degree in criminal justice, said, "At first I thought the games were corny, but now I realize a great deal can be learned, particularly by watching the behavior of the other players." Buzz Brosseau, 60, a retired naval officer, described the games as "organized confusion and a waste of time," but he had high praise for Dukes's lectures. Sophomore Janice Main, 20, spoke about Dukes's ability to conduct informal discussions with a class of 70. "Usually I never speak up in my classes, but in his class I say what I'm thinking."

Although Dukes believes his format is adaptable to other classroom settings, he warns of some possible drawbacks. For one, all instructors are not equally adept at administering simulation games. "We assume that anyone can give a good lecture—but in reality, it takes a very rare talent. The same is true with games. Not only must an instructor be committed to the method and really sell it to the students, he or she must be knowledgeable about which games exist and how to shuffle them in and out of the module to get a good fit."

For another, an instructor either must be rich in money or rich in time to assemble the games. Commercially available games are expensive: It costs $24 for Ghetto, a game in which up to 10 players vicariously experience the economic pressures that drive people into crime, welfare, and community action. On the other hand, games such as Intentional Community or In the Tube (instructions available from the authors for the cost of reproduction) are inexpensive but time consuming to construct. Furthermore, Dukes says, preparing for the games, conducting the research exercises, and evaluating students' papers require several extra hours per week over more traditional methods. For that reason, he must keep his enrollment down to about 70 students, whereas Jay Coakley, using the standard lecture format, can handle up to 199.

Fortunately Dukes does not share the dilemma of many outstanding young professors on college and university campuses: His overriding concern for the quality of undergraduate education is not costing him advancement up the professorial ladder. In fact, he is being considered a year early for promotion to associate professor, according to Paul Ballantyne, dean of the College of Letters, Arts, and Sciences.

Yet, such recognition cannot be credited entirely to his success in the classroom. During the past four years, Dukes has amassed an impressive string of professional articles on the use of games in teaching and research; he has organized and chaired seminars at conferences of national and regional sociological associations; and he currently serves as simulation review editor for the journal *Simulation and Games*.

"I hate to make that dichotomy between teaching and research," says Ballantyne. "The more interested a teacher is in his subject, the more he is involved in his teaching. In Dukes's case, his teaching, research, and publication record are all truly outstanding."

Indeed, it is impossible to determine whether teaching or research carries the greater weight in the dean's office at Colorado Springs. Perhaps in Dukes's case the question is academic: He seems to have the stamina to do both equally well. ■

ENDING THE BASICS BLUES

by Susan Nelson

Not all sociology majors need to understand R-squares and algebraic equations in order to make it through the statistics and methods courses that are still basic to the discipline—at least not the sociology majors at the University of Iowa who are students of Stephen G. Wieting. Computers and Wieting's somewhat revolutionary approach to education make the difference between traditionally baffling, if not downright boring, basics and the two-semester course as he teaches it. His first-semester statistics course serves primarily as an introduction to the language and basic forms of scientific thought. They, in turn, are the foundation upon which Wieting's research-oriented second semester methods course is built.

For the first time in recent years, his is the only section of the course being offered. A decrease in the number of sociology majors and the popularity of Wieting's teaching methods account for this, according to department chairman Hallowell Pope. Wieting characteristically shrugs off the matter of popularity and talks instead about the trend away from sociology, which had boomed during the socially conscious late 1960s. Today, getting a job is the students' main concern, he emphasizes. To that end, Wieting is making plans to extend the parameters of his courses so that they will be even more useful to future sociology majors.

When I visited the methods class, the course was in the final stretch of spring semester, and the class appeared to have no trouble keeping up with a lecture on "experimental methods." Each student had been given an outline to be filled in as the professor spoke. Such outlines accompany each lecture. There were frequent allusions to such social trends as the Model Cities Program, the Gray Panthers, and even violence in the family. In lectures as well as in the handbook Wieting has coauthored for his class, emphasis is on applications of sociological theories to the world beyond the almost pastoral campus on the bluffs above the Iowa River.

It is also learning by experience rather than just by talking that sets this class apart. Students begin the second semester with an introduction to SIMSEARCH, six computer simulations that deal with decision making in research situations. The course is arranged with two lectures and one lab each week; the first two lab sessions introduce students to the computers. Thereafter they are urged to go through the simulations on their own as often as they wish. No one checks attendance at any of the computer terminals.

All six SIMSEARCH modules present hypothetical research problems of current interest to students. Each presents a basic situation and then, in the manner of IBM computers that almost magically produce green paper "dialogue" from the innards of an otherwise standard typewriter, lures students to keep tapping out answers that both advance their research papers and provide material for classroom discussion. POVCUL, for instance, gives background information on the "culture of poverty" theories of Daniel Moynihan and Oscar Lewis. It then adds a new wrinkle: "Recently Charles Valentine has criticized both Moynihan and Lewis...[and] argues that...the supposed 'culture of poverty' has a strong community organization and resiliency in its interchange with the majority culture. He concludes that even though there are data showing weaknesses, there are data showing strengths in the supposed 'culture.'"

Then, almost in the fashion of a tape-recorded assignment on "Mission: Impossible," students encounter six areas that require decisions. These decisions, Wieting contends, are the basic six any researcher must deal with: zeroing in on the problem; selecting the appropriate theory to be tested; choosing the most feasible sample for testing the theory, given such external constraints as time and research money; choosing the best design to test the theory; accurately measuring the data; and, finally, selecting the appropriate analysis of the information collected.

Constraints in POVCUL advise students, "You have use of $5,000 and one and one half years to complete the study." Each subsequent answer must adhere to that constraint, as well as follow logically the correct answers to all preceding questions. The computer talk, written by Wieting, is generous with praise for correct answers and with encouragement in the event of incorrect choices. It also explains why a response is or is not the best one to a particular question. Other simulations are DEVIAN, which proposes a project that will study recidivism rates among prisoners; FAMILY, a proposed study of mother-child relationships; GENCON, which deals with intergenerational conflicts; SEXRLE, a study of sex roles in America; and SPORT, which suggests

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University of Iowa Photo Relations

Stephen Wieting explains a SIMSEARCH module to one of his students.

research on a team that loses its star.

Several of the SIMSEARCHes liven up this six-part progression with an "unexpected occurrence." In SPORT, for instance, one of the lesser players on the volleyball team the student has chosen to study suffers a concussion during a game. The correct procedure in this dilemma is to "disregard all results accumulated so far and begin the experiment again 10 days later" because "there is a good chance that team morale may have been affected by the injury."

SIMSEARCH is not the only facet of Wieting's methods course. In addition, students are responsible for actual research projects of their choice, monitored as closely as each of them wishes. It is in this way, perhaps, that Wieting's course also veers furthest from the traditional curriculum. Usually, only graduate students are permitted independent research work.

The course is a far cry from the lecture-style methods course Wieting took when he was a sociology major in the early 1960s. It is also different from methods study Pam Griebel, one of Wieting's two teaching assistants, completed a few years ago at the University of Iowa. Griebel, who expects to receive both her master's in sociology and her law degree in December, was unaware of Wieting when she was an undergraduate. Now in her second year of assisting, she is in full agreement with the philosophies of education he represents. So is Duane C. Spriestersbach, university vice president for development and research, dean of the graduate college, and administrator of the computer center. He regards Wieting as a midwestern Mr. Chips—if Chips had met up with computers.

It was almost by accident that Wieting met up with computers. Had he continued without interruption to his PhD after graduating in 1962 from Whitworth College in his native Washington, he probably would have matriculated too early to get any firsthand experience with this teaching tool. Instead, he came to teaching six years later. In those intervening years he completed a bachelor's of divinity at Princeton Theological Seminary. "After I decided I didn't want to be a clergyman," he recalls, "I arrived at a career choice by excluding the alternatives. I tried business, social work, and even house painting." Then Wieting entered the Navy and served in Vietnam from 1966 to 1968. "Afterwards, when I asked myself what I wanted to be doing in 40 years, the answer was teaching."

He chose the sociology department of the University of Minnesota for graduate studies where, coincidentally, interest in interactional instructional computing was just beginning. He was influenced there, he says, by Reuben Hill and Donald McTavish, "both very good researchers." It was also at Minnesota that Wieting met Thomas F. Condon, a fellow graduate student who introduced him to the ideas of Omar Khayyam Moore, a sociologist, and Alan Ross Anderson, a philosopher. This was shortly after their publication of "Some Principles for the Design of Clarifying Educational Environments" in *Handbook of Socialization Theory and Research* edited by David Goslin (Rand McNally, 1969).

Chief among their ideas, which Wieting and Condon have adapted to college sociology, is the notion that since World War II America has changed from a "performance society" to a "learning society." Wieting explains that a performance society "means that when you go to college you're going to get all the information you need to function as a professional. In other words, sociology is static: You're going to have your tools when you're 22, so you go out and apply them. A learning society, on the other hand, assumes that information is expanding so rapidly that the things you learn as a freshman will be out-of-date by the time you're a senior. The more rapidly the information expands, the faster this out-of-dateness happens."

Wieting firmly believes that today's society is the latter type. His experiences, he says, do not allow him to keep up with all the new developments in his field. "So what we're operating with is the idea of teaching people to learn. We want to create a lot of experiences where students can operate autonomously, where they don't have to be dependent on a lecture. We really don't care, for in-

Learning Experience:
Research Methods Training. Prerequisites: two introductory sociology courses (principles and problems). Enrollment: 60 per semester.

Other descriptions:
"Simulated Research Experiences for Use in Teaching Research Methods," *Teaching Sociology* 3, October 1975, pp. 33-59 (available from Stephen Wieting).
"Simulated Research Experiences for Teaching Research Methodology: Some Educational Computing Implications," *SIMSOC Bulletin*, forthcoming (available from Stephen Wieting).
Omar K. Moore and Alan Ross Anderson, "Some Principles for the Design of Clarifying Educational Environments," in *Handbook of Socialization Theory and Research* edited by D.E. Goslin. Chicago: Rand McNally, 1969, pp. 571-613.

Similar programs:
University of Guelph, Guelph, Ontario; University of Iceland, Reykjavik, Iceland.

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stance, if they know what 'John Jones the theorist' said or what such-and-such a study said. We do, however, want them to be able to generate for themselves the information they need." Even being a teacher in this society means continuing to learn—from students.

Wieting is careful to explain his ideas and methods in the plural. One reason, apparently, is that he and Condon, now a member of the sociology and anthropology department at the University of Guelph, near Toronto, continue to reshape the ideas set forth in their handbook, *The Context and Practice of Sociological Research*. Beyond that, Wieting meticulously credits the people who have helped him develop the course as he now teaches it at Iowa.

In 1971 Iowa's department of sociology invited him to teach statistics and methods. The following spring a group of students studying methods with him began to meet periodically to discuss how the course might include more practical research experience along with lectures and reading. Soon Wieting and a couple of the students began to plan the course. In summer 1973 he was granted a competitive Council of Teaching Award that allowed time and funds to implement the plans. The result was the methods course that Wieting first taught in spring 1974 and has continued to experiment with ever since.

The computer was viewed as the ideal medium for allowing students immediate feedback on the consequences of their decisions. Computers, which Iowa began to use in 1965 following the lead of Dartmouth College, also would allow students to learn about research techniques at their own pace. Moreover, they would standardize what each student would receive.

Wieting's continuing dedication to the principles of Moore and Anderson further shaped the simulations. He runs through their four key principles, explaining each one as he has applied it to college sociology majors: "First, we want to decentralize the role of the teacher. Of course, that is really counter to the model of the university: The professor stands up and lays out knowledge and students either take it or they don't. What we are really doing is turning 180 degrees from that and saying, 'Learn any way you can.'"

Second among the principles is the one known as "autotelic." In this, Wieting explains, features are very much like a game. "The game is real in the sense that one has rules and learns, but it's always in a protected context." SIMSEARCH modules provide just this context, he believes. The two remaining principles are the personalization and productivity principles, which are embodied in SIMSEARCH as well.

I was particularly curious about SIMSEARCH and asked Wieting if I might give it a try. He and teaching assistant Joel Kallich then introduced me to both the Hewlett-Packard and the IBM computer terminals. I was assigned a number that would activate either computer, and set about learning how a sociologist must make decisions in research. In each of the simulations, the student—or the reporter—is asked to select the best of four choices in each of the six decision-making areas: the problem, appropriate theory, sampling, design of proof, measurement, and analysis.

Those are the same areas that students in the methods class were following as they entered the final weeks of work on their research papers. Cheryl Woodward was on her way to run a stack of computer cards through for a printout. Her subject: how popular songs from the 1950s, 1960s, and 1970s have portrayed women and their dependence on men. Dave Plagman, a senior, had conducted a field experiment in two small towns in Iowa. His problem was to check the "diffusion of responsibility" theory—which, as he explained it, accounts for urbanites' ignoring pleas for help: they do so because many other people are nearby. He wanted to test whether that theory also applied to a child pretending to be lost in a crowd leaving a theater. A 6-year-old boy approached numerous adults, asking them for help, as Plagman stood by taking notes. Once the appropriate observations had been made, a 12-year-old boy appeared to rescue the youngster. ("Get parental permission for the 6-year-old," the department's ethics committee had recommended. "That was no problem," Plagman says with a grin. "Both boys were my younger brothers.")

Lee Mallonnee, a senior, ran through

Teaching assistant Pam Griebel leads a discussion class.

University of Iowa Photo Relations

preliminary findings on her project. She had chosen five Iowa City day care centers in order to see if 10 students in each appeared to be getting cues either from teachers or from their peers on the types of toys they selected during free-play sessions. Her point was to investigate whether youngsters choose toys on the basis of traditional sex roles—dolls for girls, for example.

Steve Ecklund, a junior, was polling Iowa City policemen to determine when they thought drug arrests were appropriate and on what basis they made their decisions. Bill Skinner, a senior, was in pursuit of tattooed veterans. For his research project, he decided to see why tattooing apparently was more common among veterans of World War II than among Vietnam veterans.

All of these students appeared to have a commendable grasp of the fields they were studying and of how they were going to translate the findings into sociological terms. The course was making them confident, they said. More than that, it was preparing them to be sociologists—or particularly astute critics of the data and polls presented with almost boggling frequency by the popular media. Wieting estimates that about a third of the students will seek jobs in either social work or criminal justice. Another third, he believes, will continue with graduate studies in other fields. The remainder, he hopes, will have learned to continue learning—whatever else they may do.

In anonymous semester-end questionnaires, students have given both Wieting and his course consistently high marks. His check of students' use of SIMSEARCH in 1974-75 showed that all but two students ran through the simulations at least once. A fair number explained they had gone back at least once and tapped out all incorrect responses. Wieting surmises that they were trying to figure out how SIMSEARCH works, and what the computer would "say" if they were consistently in error. Hallowell Pope, current head under the sociology department's rotating chairmanship, says he believes Wieting has the department's support. In fact, Pope adds, "just last year we created a three-person committee to plan the expanded use of computers within sociology, and Steve is one of the members."

Although Wieting is the only member of his department who has made computers an integral part of his course, "I don't think there is resistance to the idea of computers in general," Pope observes. "There is just a lack of momentum. Many students know a lot more about computers than almost all of our faculty." The department "has no master plan to expand into computers," he continues. "The impetus comes mainly from Steve." Yet, he says, any switch to computers would come about most comfortably when other members of the staff decide on their own how best to use computers in their specialties.

This is not exactly what Wieting has in mind. He admits that he gambled a bit on departmental politics when he became a party to a third multidiscipline grant that would link sociology to the other social sciences so that a student could learn immediately what campus resources existed in other departments. If that grant comes through, it will not be the first time Steve Wieting has found himself in a delicate situation. He has been recommended for tenure by his de-

Sociology on a Trial Basis

A course in American social problems should be more than a mournful liturgy of wrongs beyond repair, says Robert Gliner of California's San Jose State University. It should expose students to a range of perspectives on American society, prod them into proposing solutions for the problems they encounter, and convince them that the sins of a society may be complicated by a multitude of extenuating circumstances.

Two years ago, Gliner devised a curriculum that did all these things—and did them according to venerable legal precedent. He turned his classroom into a courtroom, and cast his students as participants in a class action suit filed on behalf of the American people. For a semester their task was to thoroughly investigate the case of Everyperson vs. America and bring it to trial.

Gliner structured his trial by dividing American society into nine areas: the economy, the political system, the environment, the educational system, discrimination, foreign policy, consumerism, interpersonal relationships, and the justice system. In each area a prosecuting attorney, a defense attorney, and two witnesses for each side were chosen from student volunteers. For several weeks the students involved in each topic met to organize and research the specifics of the case they would present. Then Gliner—the judge—brought his gavel down, and the trial began.

Three hours a week for nine weeks the court methodically probed Everyperson's complaints. After opening statements by the attorneys for the prosecution and the defense, each of the area's four witnesses submitted to 20 minutes of direct examination by an attorney "friendly" to his side, and then 20 minutes of cross-examination. The jury, composed of all the members of the class, was requested to be in attendance throughout the proceedings.

As the trial wore on, the defense attorneys were forced to cope with a great deal of damning evidence, including the realities of economic hardship; discrimination on the basis of race, age, and sex; political indifference; environmental destruction; and consumer fraud. But to prevent the exercise from degenerating into just another rundown of social injustices, Gliner asked prosecution witnesses to suggest in their testimony feasible alternatives to the difficulties they described. Similarly, the defense was urged to mention any efforts already under way. Since the case was treated as a civil suit, the jury was continually reminded that reparation, rather than a prison sentence, would be dictated by a guilty verdict—and that at the end of the semester they would be asked to recommend appropriate restitution.

Supplementing the classroom testimony with outside readings, each juror rendered his verdict separately, in the form of a final term paper. A simple verdict of guilty (brought by

partment and appears certain to get it. But he was twice turned down by a departmental committee. His emphasis, he admits, had been on teaching and on research that he hopes will strengthen his teaching. "In much the same way, I hope my teaching strengthens my research." He also admits, however, that his writing often has tended toward "think pieces." Regarding Iowa's third, less well articulated criterion for tenure, "community service," Wieting smiles wanly and offers no comment.

After an article by Wieting appeared in *Teaching Sociology* (October 1975), he received almost 100 requests for reprints. He doesn't know whether any of the people who made the request have adapted SIMSEARCH or its principles; none wrote back in reply. SIMSEARCH has been requested for review by CONDUIT, a software dissemination unit of which the University of Iowa is a member. Wieting has no misgivings about the transferability of his approach, even in schools that have no computer systems as yet. At its core, he says, are principles that have more to do with approach than with duplication.

It is in noncomputer areas that he sees the greatest shortcomings. First, he says, "the way we're including theory just isn't yet as effective as I hope it can be. There is such an enormous amount of material, and we don't have much time. I am still very ambivalent about lecturing at all. I have never overcome the feeling of presuming on students' time. I see all the things I don't know, and I see 50 students: Is what I have to say worth 50 hours of human time?" He pauses, perplexed. "It's an enormous responsibility. I don't think I will ever get over that cold chill, that 'What am I doing here?' feeling."

He acknowledges, however, that students expect and perhaps need structured lectures—and that leads to his final concern with the course. "My preference would be not to have tests. But students don't like that." One semester he and the teaching assistants experimented by allowing students to test their own progress throughout the semester. What he learned was that "if students must get a grade, they seem to want some public, verifiable score that is also competitive."

Despite the shortcomings Wieting recognizes and the political skirmishes that may loom at Iowa—as they loom on any campus—he is clearly happy with the career he has chosen. Before he left to participate in a Minneapolis convention on aging, he recalled one student whose entire perspective may have changed after taking this radically different statistics and methods course. The student had come to the University of Iowa on a football scholarship and seemed destined to go on with football. One of the pro teams had already invited him to try out. "But that last semester here," Wieting recalls, "he really got involved in methods. We opened the office so students could use the terminals at eight o'clock on Saturday mornings, and week after week he was here, going over and over SIMSEARCH. Finally he told me that this was the first time he had ever been able to study. He had always had football games in the fall and training during the rest of the year. He decided to stay and finish his degree and get a job. To see somebody follow up a research interest like that just blows you apart." ■

most jurors) was only the beginning of the paper. Each student was asked to divide the blame among the aspects of society considered, down to the specific institutions or individuals thought responsible. He or she then had to recommend a sentence in the form of constructive alternatives for the parts of society judged to be at fault.

As Gliner had hoped, these final papers forced students to see for themselves the interdependency of all social issues, the impossibility of fixing blame precisely, and the delicate maneuvering necessary for Everyperson to have his or her inalienable rights restored. The authors of the best essays were chosen by Gliner to speak for the court in its final session, a summation in the form of a debate between prosecution and defense.

After the court had adjourned, jurors gave Gliner a positive verdict on the course itself. Its format, many students commented in an evaluation, was a valuable analytic tool, and also a very effective device for livening the classroom. They appreciated the way in which the course had woven practical, theoretical, and even utopian perspectives on society into a logical whole. In addition, many were grateful for the opportunity to fit their own opinions into a total picture.

In response to their enthusiasm Gliner retried his case the following year—this time on a larger scale and in a real court. Nine superior and municipal court judges from Santa Clara county heard the suit, which was argued by some 20 practicing attorneys from the San Francisco Bay area. Witnesses consisted of experts in the fields covered, including some of Gliner's colleagues in the department of sociology, other university professors, and professionals from the community. The 240 students enrolled in the course comprised the jury; the public, to whom the course was advertised as a Bicentennial extravaganza, was invited to attend.

Although the professionals brought detailed information and often passionate rhetoric to the stand, the jury's papers bore out Gliner's hunch that students learned more from being witnesses and lawyers themselves. Future trials will sacrifice high drama for educational concerns and be patterned on his first version of the course. Gliner would like to loosen its format somewhat to allow for more discussion of alternatives amid the straight factual testimony and to make room for an occasional professional witness. He would also like to experiment with reducing the course's scope to one social question or perhaps to an issue of particular importance in the college community. He has proven, as his students can attest, that in the classroom as well as in the courtroom, a fair trial can be a powerful tool.

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A COUNTERFORCE WITHIN THE SYSTEM

by Kenneth E. Eble

Brigham Young University is just about all a modern institution should be. It is the largest private university in the country, enrolling 25,000 students from 50 states and 69 countries. With students almost all of one faith (the Latter Day Saints), it draws on a cohesive set of values. Its basketball arena can seat almost the entire student body; its library has just been expanded to six floors and houses more than a million volumes; its faculty has been upgraded to enhance research productivity; it has recently built a law school. Nevertheless, despite its strikingly beautiful setting, its fine facilities, and its unusually homogeneous faculty and student body, BYU still is troubled by the power of the huge, multipurpose university to depersonalize learning.

The CLASP program at BYU—"Creative Learning Through the Application of Sociological Principles"—grew out of a sense of anomie and alienation. John F. Seggar, associate professor of sociology and a founder of CLASP, recalls, "I just began to distrust that students were learning anything, that I was doing anything important in going through the paces of the 50-minute class." Seggar voiced his frustrations to another professor, Wesley Craig. What could be expected of separation of bits of knowledge into scattered classes with faculty similarly compartmentalized within their colleges and specialized disciplines? Where could there be cooperation, reinforcement from peers, beneficent socialization amid the testing, grading, and certifying that characterized the college process? Where was integration of personal goals, work competence, physical and spiritual well being, development of community?

By the fall of 1972, five sociology professors—out of a department of 24—had sufficient interest in breaking out of the established pattern to form a working team. They sought a holistic and humanistic approach that might bring together the students' fragmentary learning and develop not merely a mastery of content but individual competence in learning. The basic shift was to move responsibility from teacher to student, to move away from individual classes and required assignments and into a semester-long learning experience that would take up all the student's program.

As CLASP has developed, it is a way for a student to gain a full semester's credit for working in various social science areas—juvenile delinquency, medical sociology, community development, for example—and developing personal and interpersonal competence. Each of the learning communities ...ough the five years of CLASP's existence has included freshmen to seniors from many majors, most of them outside sociology. Students learn about the program primarily from their peers or from announcements circulated across the campus. Former CLASP students make excellent recruiters. Most students who apply are accepted, and the number enrolled has increased every year. In the five years of CLASP's existence, 300 students have taken part. Though CLASP groups began with five faculty members working part time and 30 students, experience has led to a general pattern of one or two full-time faculty members, two student assistants with prior experience in the program, and no more than 35 students in each CLASP group.

The first week of a CLASP semester includes base-line tests in attitudes, knowledge of sociological content, and personality characteristics and an introduction to societal concepts through experience-based problem solving. Students spend part of the first week preparing for a Human Relations Isolation Laboratory Experience that comprises the next two weeks of the program.

CLASP now uses a number of isolated settings—a river canyon, the desert, a ranch, a mining camp, a winter lodge—for the laboratory experience. Here, staff and students establish their learning resource base—a working community. No directives or authority comes from the staff; instead traditional student/faculty roles are redefined so that each individual develops an awareness of his or her capacities for creating, adapting, cooperating—in short, for learning from others.

When the community returns to campus, each student has the responsibility for formulating his or her own learning goals, arriving at ways in which individual aims can serve and be served by community resources, and establishing relationships between on-campus and off-campus learning. At the initiative of group members, special topic seminars may be set up for all or part of the

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Mark Philbrick

A 6:15 a.m. jog brings members of CLASP together for a personal conditioning program.

group, speakers from inside and outside the University may be invited to appear, and classes may be visited or regularly attended. Most of the CLASP activities from the fourth through the seventh week give students theoretical and experiential exposure to a wide range of sociological concerns, including juvenile delinquency, aging, community planning, minority social structures, the effects of institutionalization, and the like.

At the heart of the student's planning during this period is the individual learning contract. A typical learning contract mixes personal growth goals, such as "recognizing the elements of depression and finding means to cope," with more recognizable course objectives, "reading four books on the Indian people and writing a paper that examines several perspectives of the Indian." It will likely contain a number of physical fitness pledges, such as jogging, losing weight, or participating in group physical activities.

Since BYU is a church-sponsored university, the spiritual looms large in the contracts, including intentions to read and examine basic texts of Mormon theology as well as to expand spiritual awareness. The contracts I read leaned toward personal resolves and did not seem to pose very strenuous intellectual and social demands. But the contract is only the beginning of learning, not the final product. It is a document that gains in definition and purpose as its aims are fulfilled.

Mid-semester, the eighth week, is a time for assessing the performance of the community and the student. I came away with mixed feelings from the evaluation session I attended. This group gathered at Wesley Craig's house on Friday, spent the night, and worked through on Saturday. Each student reviewed the learning contract under rather intensive questioning from Craig and fellow students.

One woman had done very little to meet her obligations. Patient and prolonged questioning brought out some of the reasons and helped her set different directions for the weeks ahead. Another seemed to be in full command of where she was going, but the questioning challenged whether she was accomplishing as much as she claimed or was trying to look good before the group. Like many of the confrontations I witnessed, this one put the student on the defensive. It left me uneasy about whether the confessional and third-degree aspects of these sessions are conducive to personal growth. Nevertheless, the evaluations accomplished what conventional testing and grading often fail to do: Learning goals for each student were certainly clarified and directions were set for the eight weeks still to come.

Field work is a major part of the CLASP semester. Most students include a plan for projects in their contracts; some begin them early in the semester. Others use the initial period to gain background information and materials, then try to clarify their objectives at the mid-semester evaluation. Projects have ranged from working with local social agencies, to living with a black family in Watts, to studying the social/political structure of a village in Portugal.

Though faculty are always at hand to give assistance, the students are responsible for making contacts, surveying possibilities, defining problems, and finding sources of support for off-campus living, travel, and the like. Critics point out that this gives affluent students the advantage of undertaking more ambitious and unusual projects, while the less affluent must stick with limited local opportunities. Though CLASP faculty would welcome financial support for field work, they do not believe the inequity seriously impairs the program. Some local projects have had very useful outcomes for both student and community. One student, who worked with the Navajos in New Mexico, was subsequently appointed full-time social caseworker in vocational rehabilitation by the Navajo Tribal Council. Other projects have resulted in community actions that reduced speed limits in one residential area, established a bike path in Provo, and set up Life Savers, a blood donation program.

Instead of the typical classroom, students choose to use a member's living room for community meetings.

Mark Philbrick

Though students remaining on or near campus during field work continue to get together for both social and academic activities, a dispersal of the group takes place after the eighth week. Field work varies in duration and time of completion, but the last two weeks of the semester are used for presenting results to the group and discussing and analyzing what has gone on. Individual grades are worked out between each student and a faculty member.

Evaluations the CLASP team has made of the program show impressive gains in a number of respects. In 1973 a pretest/posttest design using materials developed by Individual Learning Systems to cover general concepts in introductory sociology compared 61 students in CLASP with 80 students in a three-hour social problems class. The CLASP students showed significantly greater mastery of material. A similar design using the Tennessee Self-Concept Scale was applied to two CLASP communities as compared with three small learning groups, a behavior modification group, and a regular sociology class. Again the results reflected significant desirable changes for the CLASP students. In neither instance was the testing sufficiently rigorous to isolate variables that might produce compelling evidence of superior specific learning. While the team plans to carry out other evaluations, the best measure of the program's effectiveness may be that it has survived and grown despite the fact that it breaks with prevailing faculty and student roles, lacks a clear-cut place among majors and requirements, competes not with just one but with a variety of classes for enrollments, and is at some odds with the structured and regulated character of the university.

Learning experience:
CLASP—Creative Learning Through Sociological Principles. No prerequisites. Enrollment: 35.

Contact:
John F. Seggar or Wesley W. Craig, Jr., Department of Sociology, 164FOB, Brigham Young University, Provo, Utah 84602, (801) 374-1211 x3392.

Team members are convinced that CLASP is achieving a kind of learning unavailable within the ordinary confines of the curriculum. Support at present, they feel, is strong from the administration, less strong from the faculty. Department chairman Spencer Condie has given his support, partly because he recognizes that CLASP has breathed some vitality into sociology offerings. He feels, however, that faculty who work with CLASP comprise a distinct group; other faculty are not interested in expanding the program, and some are openly critical. In a published reaction to the CLASP program, two colleagues accused it of introducing an "ideology somewhat divisive to department unity." But must a department have one ideology? A more persuasive charge was that of emphasis on interpersonal development over sociological concerns.

Students I spoke to were clear and specific in both their criticism and praise of the program. "Before CLASP," one woman said, "all I ever did was go to class and listen to professors." "And cram and memorize," another added. Most praised the stress the program puts

Mapping the Learning Terrain

As a teaching assistant in the early 1970s, Thomas Rice was afraid he'd chosen the wrong vocation. "I just couldn't hold their interest," says Rice, assistant professor of sociology at Denison University in Granville, Ohio. "It was tremendously frustrating. I felt there had to be a way to break through the mind-killing passivity of the American classroom."

A workshop in group dynamics that Rice attended in 1974 provided the answer. Impressed with what he saw accomplished in carefully orchestrated small groups, Rice adapted the group cognitive mapping technique from William F. Hill's manual, *Learning Thru Discussion*. Based on the notion that it is important to "map" a learning terrain before covering it, the group cognitive map guides the class through the material in a series of steps, moving students systematically from simple to complex thinking.

Rice uses the technique for all his teaching, but he finds it most valuable in the introductory course. Here enrollment is limited to 35, and students are divided into groups of 5 to 8. At the weekly two-hour meeting, each group works with a teaching assistant while Rice moves from room to room as an observer. In preparation for the meetings, students, TAs, and the professor read the materials assigned for the week's topic and execute maps—that is, they take the information through a prescribed set of steps. For example, when the subject is social class, step one calls for definitions of terms and concepts. Next is a general statement of the authors' messages. Major themes and subtopics are listed, such as socioeconomic status, the Marxian definition of social class, and the causes and consequences of social class.

Then these points are expanded upon and integrated with knowledge acquired in other disciplines—Aristotle's opinion about the need for hierarchy might be mentioned or biochemical findings on the low metabolic rate of members of low socioeconomic groups. For the next step material is applied to personal experience and used for problem solving: "Ideally," Rice explains, "a student would gain insight into the dismay her parents feel because, say, her boyfriend is a plumber." Finally, the authors' presentations are evaluated.

Class discussion follows the same procedure. Early in the week, TAs bring the maps they have prepared to a dress rehearsal with Rice. At class time they lead students through the process, adding two additional steps: The group decides how much time should be allocated to each section and evaluates collective and individual performance. Afterward, students' maps are gathered and returned as soon as possible with copious written comments, most often requests for more elaboration. "We keep pushing them to analyze, explain, integrate," Rice says. "I won't settle for statements like, 'I found the reading interesting.' If I did that, they'd never transcend that level."

The mechanics of group interac-

on independent learning, student responsibility, interpersonal relations, and opening up a wider range of experience. All liked the way CLASP had tied their previous and present learning together. Some mentioned that for perhaps four or five in their community CLASP didn't seem to work at all; some students took advantage of the loose structure or were not up to the responsibilities the program placed on them.

The practical difficulties of sustaining CLASP are chiefly those faced by most innovative programs that entail changes in faculty and student habits and roles. Faculty who opt into the program lose many of the simple satisfactions they are used to: a limited number of student contact hours, limited roles as counselors, free time for their own research, and the security of established regulations and procedures.

In some ways, CLASP is an extension of the idealism of the sixties: the strongly felt need to humanize and personalize mass education, to break the tyranny of curriculum and faculty prerogatives, to transcend student passivity, and to forge connections between a university's actions and social consequences. Some of the means are characteristic of the sixties, too: the marathon truth sessions, the invasion of wilderness en masse, the tinkering with individual behavior through group sessions. Still, CLASP seems to have learned from the past and is trying to uphold the values of shared learning in a not very receptive present.

Seggar and his colleagues express some discouragement that CLASP has had little impact on conventional courses in sociology. Initially some attempt was made to embrace the introductory course in sociology that enrolls about 1200 students a year. But problems arose: chiefly too many students and too many faculty locked into too standard a pattern. Some of the CLASP faculty still teach the introductory course, but CLASP itself has had no direct effect upon it. The introductory course, like such courses elsewhere, is cut off from the faculty's main commitments and satisfactions.

But while CLASP has not had much of an impact on the conventional offerings in the sociology department, it has begun to make an indentation elsewhere. The undergraduate Social Work Program ran a CLASP semester this past spring and is making plans to broaden the program as an offering to all 250 of its majors. The undergraduate Law Enforcement Program is planning a CLASP semester next winter, thanks to the efforts of a former CLASP student, now a faculty member in law enforcement. But while CLASP has been presented at several regional sociological professional meetings, it has still to be tested at other universities.

Craig expresses satisfaction that he and his colleagues have found a way within the system to significantly affect students' learning and lives. He insists that doing something of real consequence even for a few is worth the effort, particularly since the opportunity is open and made known to all. Perhaps he is right that a program this size is about what the climate at BYU will support. Such efforts as there are to humanize, integrate, and personalize higher education will probably come from faculty who can find ways to create some counterforce within the system to the conservatism of the seventies. ■

tion play a central role in the method's success. Strict rules for the exchange of criticism and suggestions prevail throughout, and a more-than-nodding acquaintance with group dynamics principles is vital for all participants. Rice says that when a faculty member tried the method without first sensitizing students to the delicacy of group communication, "the class perceived it as heavy structure and mutinied. You can't just throw the tool on them and expect it to work."

Rice also believes it's more important to be creative with the map than to follow it stringently. Early in the introductory course, when students feel more at home with descriptive than analytic work, he concentrates on that; gradually he eases into emphasis on the more sophisticated steps. In the first months he also distributes a "scoop sheet" that guides students to significant terms and subtopics. In higher level courses he freely adds and discards steps. For instance, the map for his research methods class doesn't require that the author's message be stated but does call for discussion on the role of the topic in the research process.

"The fact that the entire class period focuses on their participation inspires students to do the preparation," Rice reports. "And once they've spent three hours preparing, they're not about to keep quiet. The passive, reticent student sees that his mistakes are no worse than those of very good students and that his contributions are valuable too. He learns that all he needs to do for a rewarding classroom experience is prepare. And there's no cramming at exam time. Since exams are based on the maps, students just reread them."

Rice's colleague in the sociology department has adopted the method, and it is becoming popular in other disciplines as well. A history professor who uses it successfully praises the smoothness with which content is covered and notes that students arrive eager to begin, without the gossiping and settling-down rituals that invariably take place at the start of traditional classes.

Typical of student reaction is this answer to Rice's request on an evaluation form for a "rating of the group cognitive mapping technique in terms of its contribution to your learning sociology": "In working through a map, my thoughts are channeled to be put down logically. I feel challenged to think for myself and to find the relationship of the material to my life and society. I wish we had this in all my courses because it forces procrastinators like me to get involved. Thank you." Rice comments, "I think the promise of this method is immense. Widely used, it could shift the educational experience from the barren, credit-collecting exercise it too often becomes to the vibrant pursuit of knowledge it is supposed to be."

For more information: Thomas Rice, Department of Sociology and Anthropology, Blair Knapp Hall, Denison University, Granville, OH 43023, (614) 587-0810.

Turning the Tables With Audiovisuals

In a society increasingly molded by television and film communication, the classroom need not be one of the last grim bastions of the written word. Most educators take liberal advantage of audiovisual technology as they present their ideas to their classes. But in the sociology classrooms of Vaneeta D'Andrea Burkhart, assistant professor at Essex Community College in Baltimore, the tables have been turned. Her students are provided with a full range of audiovisual aids with which to present their ideas to her.

For the past five years, Burkhart's students have had the option of consolidating their end-of-term thoughts on film, tape, or videotape cassettes rather than on sheaves of typed pages. The College supplies a well-stocked media room from which students may borrow all the equipment necessary for their projects. Burkhart and other faculty members provide the technical know-how, although students are quick to become media experts themselves. And at year's end students produce media projects that reflect a semester's worth of sociological insight.

Projects have been submitted in all of Burkhart's courses, which range from Introductory Sociology to Community Power and Organization, Women's Studies, and Minority Relations. They are usually 15 minutes to an hour in length and represent 10 to 12 weeks of preparation. Recent projects have included a slide show analyzing the social organization of a wilderness canoe trip, a film on the Amish as a subculture, a film and tape presentation exploring the normative behavior patterns at local night clubs, and a multimedia (slide/tape/film) discussion of the social foundations of the 1972 national political campaign.

According to Burkhart, giving students this option makes the classroom simply "a much more vital place to be." Students who feel ill at ease with the written word, usually handicapped in the classroom by their poor verbal skills, can suddenly communicate as they never have before. Avenues of academic achievement previously unknown to them are opened wide, and most students who elect the media option finish the venture with the same infectious enthusiasm with which they began.

To the question that most troubles traditionally oriented colleagues—Can these projects be equated with written research?—Burkhart nods an emphatic "yes." She points out that the basic steps of collecting and analyzing information are the same for any term project. Media projects are evaluated and graded according to a checklist that also applies to papers. Burkhart argues that if a project is superbly researched, organized, and presented, if it offers a well-formulated piece of sociological thought, then the manner in which the information is communicated becomes a spurious issue.

Carol Retz

Here one student handles the camera-work for a student production. Projects represent 10 to 12 weeks of preparation.

The fact that each media project is typically a group effort involving four or five students also disturbs some colleagues. But Burkhart has streamlined the organization of the media crews to equalize participation. Positions on the film crew, sound crew, and research staff of a project carry specific responsibilities. The major role of director must be rotated among all students who wish an A in the course. And Burkhart requests that students keep a diary of all the organizing and planning sessions the project requires, to be handed in with the finished project.

Over the five years in which she has offered the media option, Burkhart has noted changes in the reception her idea is accorded. Students' unilateral enthusiasm is a constant—but among her colleagues she is no longer "the weirdo in the sociology department." As her former students have moved on to other professors, they have spread the gospel; consequently, there are now one or two projects under way in other departments, including history, economics, education, and nursing.

In addition, the subterfuge to which Burkhart was first driven in order to provide materials for her students is no longer necessary. Initially she would sign equipment out under her own name and turn it over to students; now they are free to tap the media room at will, as long as everything is returned within 48 hours so that others may use it. Tapes and videotapes are reused from semester to semester, though Burkhart hopes to establish a collection of the best projects in the college library as a permanent source of information and inspiration for succeeding classes. A film series now shows the best projects publicly at the end of each semester.

The head of the Essex audiovisual center estimates that a college can put together a media room such as his for about $10,000. Burkhart's students—about 10 or 15 elect the option each semester—can choose from a good range of basic audiovisual equipment that puts films, slide shows, tapes, and videotapes within their reach.

"At the beginning an instructor must be willing to spend a lot of time with the students, presenting clearly defined objectives, distinguishing journalistic from sociological methods of analysis, and explaining the technology," summarizes Burkhart. "But after a while they just don't need you—they take off by themselves."

For more information: Vaneeta D'Andrea Burkhart, Department of Sociology, Essex Community College, Baltimore County, MD 21237, (301) 682-6000 x390 or x331.

Challenging the Sociologist's Eye View

Paul J. Baker of Illinois State University is trying to bridge the chasm between the academic sociology of a semester and the sociological education of a lifetime. Over the course of several years he has built a new approach to the teaching of sociology that presents the subject less as an intellectual discipline than as an educational tool that students can use long after the course has ended. After several trial runs in seminars for honors seniors and graduate students, his approach was translated into an introductory syllabus and presented to an undergraduate class for the first time in the fall of 1976.

Called Learning Through Contrasting Perspectives, Baker's course is, simply, an attempt to bring academic sociology into perspective. Baker hands students three different pairs of glasses with which to view the world: the often distorted lenses of their own prejudices and instincts, the panoramic spectacles of journalism, and the careful, self-conscious magnifying glass of the sociologist. Students study the ways different problems are probed in each of these world views.

The course syllabus is a measured progression through the conclusions drawn by sociologists, journalists, and commonsense thinkers as they face six contemporary social problems: crime and delinquency, race relations, changing sex roles, social inequality, urban crisis, and population and pollution. The sociologists speak to the students through an assortment of assigned articles from academic journals. The journalists have their say in a stack of clippings from daily papers (selected by students), as well as in articles from national magazines. The man in the street is just that, interviewed by students who have been instructed that they are not to take attitude surveys so much as probe how people think.

For each two-week unit—each social problem—students are required to attend lectures, do readings, and produce a piece of written work in the form of either a take-home quiz or an essay. They are to contrast on paper the ways in which two of the perspectives they have explored perceive the issue in question. They may choose to address only one aspect of a problem: interracial marriage or busing as a facet of race relations, a single mugging as an example of crime and delinquency, a local sewage dump as a microcosm of population and pollution. They may concentrate on the way the problem is defined or documented, rather than on the way it is analyzed or solved. But they must come to some conclusions regarding the comparative sophistication of the two perspectives chosen, the degree of objectivity each observer exercises, and the degree of abstraction in the reactions or proposed solutions.

Over the course of the fall Baker's students produced papers covering a gamut of social issues. One student chose to approach social inequality by comparing the theory of food stamps as explained in social work journals to the journalist's reality depicted in cartoons, editorials, and articles. Another probed a smoldering busing controversy in nearby Peoria, attending town meetings and reading local newspapers and then comparing these reactions to the sociologist's version of busing and the views expounded in the national press.

Throughout the course, Baker deliberately focuses on the tensions between the sociological and other methods of looking at life. He attempts to gainsay the "cosmetic" sociology offered by most textbooks and many courses, which leaves the impression that the scientific pretensions of sociology render it far superior to other ways of observing the world. He wants to make it clear that the stereotypes do not always apply: The sociologist does not always offer a cautious, deliberate review of the evidence as contrasted with the journalist's sweeping generalizations and the chaotic, blurred world of commonsense ideas. Often, though, these stereotypes prove to be very accurate indeed. As his students progress through the course they learn not only, in his phrase, to "reconstruct the world," but also to evaluate those who would reconstruct it for them.

Like any methodology aired for the first time, Baker's has provoked its share of controversy. Colleagues at other schools have applauded his theories, but within his own department they are regarded as less thought provoking than provoking. "Bringing sociology out into the world and forcing it to defend itself smacks of civics teaching to my colleagues," says Baker. "They think I'm groveling to the media. One said to me, 'I see you don't teach sociology anymore.'"

The same criticism might have been offered by students alienated from both professor and course by a variety of rigors Baker terms "mistakes I won't repeat." Reading and writing tests administered during the course's first meetings pinpointed students with poor verbal skills—many of whom felt Baker had no business steering them toward the University's remedial facilities. The course's workload, not small by any standards, scared other students away, and the self-paced format Baker adopted caused some to fall hopelessly behind.

But those students who lasted through the course emerged victorious. A university evaluation documents an almost complete reversal in their attitudes, from baffled resentment as Baker outlined his objectives on the first day of class to a sense that they had indeed become richer for the experience. "When I read a newspaper now I'm aware of the analytical model they're creating," said one student. Others report that they used methods drilled into them by Baker when they wrote papers and exams for other courses and reaped excellent marks.

Baker plans to redesign those aspects of his course that overworked both him and his students during the last hectic weeks of its maiden voyage. But he is convinced that the model upon which the course is built, one which is applicable to any curriculum level, will endure.

For more information: Paul J. Baker, Department of Sociology, Illinois State University, Normal, IL 61761, (309) 436-7667 or 438-7959.

INDEX

The learning experiences presented in the first four Reports on Teaching are included here in a subject index designed for those interested in a particular approach to teaching. It is divided into four main headings: (1) teaching strategies, including various techniques used in the learning experience from lecturing and team teaching to the use of multi-media and computers; (2) focus, indicating the general direction of the studies, whether for career orientation, underprepared students, etc.; (3) evaluation, noting various approaches to grading; and (4) course management, listing those learning experiences that are interdisciplinary or a modification of the traditional approach. Overview articles are those written by the project staff or by the association representative from each of the disciplines appearing in the Reports.

Subheadings are listed alphabetically, and each entry includes the name of the professor, the number of the Teaching Report in which the course is described, and the page number. Thus 2:47 indicates Report on Teaching #2, page 47.

Report #1 (March 1976) includes undergraduate teaching in chemistry, history, and psychology; Report #2 (July 1976) includes biology, English, and political science; Report #3 (January 1977) covers economics, mathematics, and philosophy; and Report #4 (July 1977) looks at teaching in geography, music, and sociology.

TEACHING STRATEGIES

Case Studies
Asher 2:36, Baker 4:71, Fels 3:8, Kerber 1:41, Kraus 2:46, Leftwich 3:18, McConnell 1:62, Oshinsky 1:64, Paden 3:14, Saunders 3:20.

Computer-Related Prc dures
Beck 2:62, Burns 1:42, Dolbear 3:16, Facione 3:62, Kelley 3:24, Main 1:46, Masters 2:68, Myers 2:20, Noel 2:56, Paden 3:14, Pride 2:52, Shapiro 3:44, Smith 1:6, Wieting 4:61, Yingling 1:21, Ziegler 4:12.

Field Study
Abbott 4:54, Barnard 1:10, Breiseth 1:33, Candland 1:63, Clark 2:42, Curran 4:52, Curtis 1:26, Jernstedt 1:58, Kakela 4:14, Lanegran 4:18, Mulligan 2:18, Myers 2:20, Ostrom 2:64, Romey 4:16, Wieting 4:61, Winkler 2:24.

Independent Study
Barnard 1:10, Blizek 3:52, Breiseth 1:33, Curtis 1:26, Gilleland 1:18, Hedman 3:54, Mellert 3:68, Romey 4:16, Seggar 4:68, Sipe 1:23, West 1:14.

Internships
Breiseth 1:33, Burke 2:70, Heiges 4:20, Roberts 3:45.

Lecturing
Allison 3:12, Avila 2:16, Bernstein 3:58, Blizek 3:52, Burns 1:42, English 4:22, Jacobs 4:6, Lofquist 1:63, Jernstedt 1:58, Maas 1:50, McWilliams 2:68, Rosen 3:50, Saunders 3:20, Shakhashiri 1:22, Volpe 2:24, West 1:14, Wright 1:30.

Models or Illustrations
Asher 2:36, Baker 4:71, Boulding 3:11, deFord 2:49, DeLucia 4:28, Dodge 2:26, Dolbear 3:16, Fels 3:8, Gliner 4:64, Gould 4:24, Hedman 3:54, Kotnik 1:22, Leftwich 3:18, Main 1:46, Noel 2:56, Paden 3:14, Rice 4:68, Saunders 3:20, Tobias 3:40.

Modular Instruction
Barnard 1:10, Beck 2:62, Beishir 2:15, Coole 3:67, Dodge 2:26, Dukes 4:57, Facione 3:62, Gilleland 1:18, Jordan 2:12, Myers 2:20, Postlethwait 2:8, Richason 4:25, Stouffer 2:60, Travis 3:28.

Multi-Media
Barnard 1:10, Bluestein 1:64, Burkhart 4:32, Carrier 4:37, Curtis 1:26, English 4:22, Gilleland 1:18, Hine 1:37, Lofquist 1:63, Jordan 2:12, Kotnik 1:22, Mellert 3:68, Mertens 1:62, Myers 2:20, Postlethwait 2:8, Pride 2:52, Richason 4:25, Rockhill 3:46, Steele 2:44, Travis 3:28, Yingling 1:21.

Peer Teaching
Allison 3:12, Anderson 3:36, Bruffee 2:30, Coole 3:67, Croft 2:46, Fels 3:8, Jernstedt 1:58, Ladd 1:54, Maas 1:50, Travis 3:28, Yingling 1:21.

Practica
Candland 1:63, Demand 4:36, Howes 2:48, Landon 4:42, McConnell 1:62.

Research
Baker 4:71, Barnard 1:10, Beck 2:62, Bluestein 1:64, Boulding 3:11, Breiseth 1:33, Curran 4:52, Curtis 1:26, Gilleland 1:18, Kakela 4:14, Kerber 1:41, Kraus 2:46, Main 1:46, Noel 2:56, Olson 4:59, Ostrom 2:64, Pride 2:52, Roberts 3:45, Sipe 1:23, Wieting 4:61, Winkler 2:24.

Role Playing
Dukes 4:57, Gilbert 2:34, Gliner 4:64, Ladd 1:54, McConnell 1:62, Noel 2:56.

Self-Paced Instruction
Allison 3:12, Anderson 3:36, Barnard 1:10, Beishir 2:15, Coole 3:67, Facione 3:62, Fels 3:8, Gilleland 1:18, Jernstedt 1:58, Kelley 3:24, Myers 2:20, Postlethwait 2:8, Richason 4:25, Shakhashiri 1:22, Smith 1:6, Stouffer 2:60, Travis 3:28.

Simulation and Games
Boulding 3:11, Dolbear 3:16, Dukes

4:57, Gliner 4:64, Ladd 1:54, Mecke 2:48, Noel 2:56.

Teaching Assistants—Graduates
Allison 3:12, Bluestein 1:64, Facione 3:62, Ladd 1:54, Saunders 3:20, Shakhashiri 1:22, West 1:14, Wright 1:30.

Team Teaching
Barnard 1:10, Breiseth 1:33, Curran 4:52, Curtis 1:26, Gilbert 2:34, Howes 2:48, Lofquist 1:63, Oshinsky 1:64, Seggar 4:68, Torgerson 3:66, Travis 3:28.

FOCUS

Career Orientation
Asher 2:36, Avila 2:16, Burke 2:70, Hedman 3:54, Heiges 4:20, Howes 2:48, Lee 4:46, Roberts 3:45, Tobias 3:40, Winkler 2:24.

Interpersonal Process
Bruffee 2:30, Candland 1:63, Clark 2:42, Gilbert 2:34, Hedman 3:54, Howes 2:48, Ladd 1:54, Maas 1:50, McConnell 1:62, Mecke 2:48, Noel 2:56, Seggar 4:68.

Personal Growth
Avila 2:16, Bernstein 3:58, Bluestein 1:64, Breiseth 1:33, Candland 1:63, Clark 2:42, Curran 4:52, Kotnik 1:22, Ladd 1:54, Mecke 2:48, Rosen 3:50, Seggar 4:68, Tobias 3:40.

Skill Development
Ackley 2:38, Asher 2:36, Barnard 1:10, Beck 2:62, Bland 1:21, Breeden 4:44, Breiseth 1:33, Bruffee 2:30, Burkart 4:32, Carrier 4:37, Croft 2:46, Dodge 2:26, Eisman 4:48, Facione 3:62, Gilleland 1:18, Jordan 2:12, Lee 4:46, Lochhead 3:47, Main 1:46, Myers 2:20, Ostrom 2:64, Pace 4:34, Postlethwait 2:8, Pride 2:52, Roberts 3:45, Sipe 1:23, Smith 1:6, Travis 3:28, Wessler 4:40, West 1:14.

Underprepared Students
Ackley 2:38, Avila 2:16, Gould 4:24, Kotnik 1:22, Stouffer 2:60, Tobias 3:40, Travis 3:28.

EVALUATION

Competencies
Ackley 2:38, Breiseth 1:33, Facione 3:62, Landon 4:42.

Contract Grading
Bluestein 1:64, Kotnik 1:22, McConnell 1:62, Mellert 3:68, West 1:14.

Formative Evaluation
Allison 3:12, Anderson 3:36, Barnard 1:10, Breiseth 1:33, Bruffee 2:30, Burns 1:42, Coole 3:67, Facione 3:62, Fels 3:8, Howes 2:48, Jordan 2:12, Kelley 3:24, Ladd 1:54, Lochhead 3:47, Main 1:46, Myers 2:20, Postlethwait 2:8, Rockhill 3:46, Shakhashiri 1:22, Shapiro 3:44, Stouffer 2:60, Tobias 3:40, Travis 3:28, Yingling 1:21.

COURSE MANAGEMENT

Interdisciplinary Courses
Barnard 1:10, Candland 1:63, Clark 2:42, Curtis 1:26, Hedman 3:54, Mulligan 2:18, Romey 4:16, Steele 2:44, White 3:38.

Modification of Major Sequences
Ackley 2:38, Allison 3:12, Barnard 1:10, Breiseth 1:33, Fels 3:8, Gilbert 2:34, Gilleland 1:18, Jordan 2:12, Leftwich 3:18, Saunders 3:20, Sipe 1:23.

OVERVIEW ARTICLES

Bach 3:6; Cowan 2:23; Dodge 2:26; Hollister 1:24; Kirkpatrick 2:50; Koeppen 2:50; Mauksch 4:50; Meeth 1:2, 2:3, 3:4, 4:4; Natoli 4:10; Nazzaro 1:44; Pattison 4:10; Rhoades 4:50; Schneewind 3:48; Tellstrom 4:30; West 1:14; Willcox 3:26.